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# Infantry

A PROFESSIONAL JOURNAL FOR THE COMBINED ARMS TEAM

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A PROFESSIONAL JOURNAL FOR THE COMBINED ARMS TEAM

A Department of the Army Publication

63d Year

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January-February 1983

Volume 73, Number 1

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## FRONT COVER

On the future battlefield, only those soldiers and units that are hardened, disciplined, and conditioned to function effectively under the most adverse conditions are going to be able to win through to victory.



**FLARE**



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**INFANTRY:** Published bimonthly at the United States Army Infantry School, it provides current information on infantry organization, weapons, equipment, tactics, and techniques. It also includes relevant historical articles and serves as a forum for professional ideas. Unless otherwise stated, the views herein are those of the authors and not necessarily those of the Department of Defense or any element thereof. The use of funds for printing INFANTRY was approved 10 September 1982 by Headquarters, Department of the Army. The Honorable John O. Marsh, Jr., Secretary. Official distribution: three copies to each infantry and infantry-related unit and to appropriate staff agencies and service schools.

**SUBSCRIPTIONS:** One year, \$10.00; two years, \$19.00. Single copy, \$2.50. A foreign (non-APO) subscriber must add \$3.00 per year for postage on each subscription. Payment must be made either by United States currency, by international money order, or by a check or draft drawn on a bank in the United States. One-year subscriptions are not refundable. Two-year subscriptions are refundable, but service and handling charges will be deducted. The expiration date of a subscription is shown in the first four-digit number on the address label's first line (the first two digits indicate the month, the last two digits, the year). Please notify your postmaster and INFANTRY promptly of any change of address.

**CORRESPONDENCE:** Address all correspondence to Editor, INFANTRY Magazine, Box 2005, Fort Benning, Georgia 31905. Please furnish complete return address. Queries are answered promptly. Manuscripts are acknowledged within 30 days. Telephones: Editorial Office — 404-544-4951 (AUTOVON 784-4951); Business Office — 404-545-5997 (AUTOVON 835-5997).

**POSTMASTER:** Second-class postage paid at Columbus, Georgia and at Pensacola, Florida. Send Form 3579 to Circulation Department, INFANTRY Magazine, Box 2005, Fort Benning, Georgia 31905. For forwarding to a member of the U.S. military services, see Section 158.4, Postal Service Manual, U.S. Postal Service Publication Number: 370630. ISSN: 0019-9532.



# Commandant's NOTE



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MAJOR GENERAL SAM WETZEL

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## INFANTRY PROPONENCY

On 1 October 1981 specialty proponency for the various branches was transferred to the commandants of the respective service schools. Thus, I, as Commandant of the U.S. Army Infantry School, became the Chief of Infantry.

This transfer of proponency for infantry was intended to ensure that specific infantry needs are taken into consideration when personnel management policies are established by the Department of the Army. The Infantry School is now responsible for gathering and evaluating information, for setting priorities, and for making changes that will improve the infantry and the individual infantryman.

One of the first problems we have had to face as infantry proponents is an MOS imbalance in certain enlisted ranks that limits promotion opportunities.

First, there is an imbalance between the ranks of sergeant and staff sergeant in MOS 11B (Infantryman). Because there are not enough authorizations at the rank of sergeant to permit smooth progression between the two grades, many sergeants are doing the work of staff sergeants without the additional pay or the additional rank.

A similar problem exists in MOS 11C (Indirect Fire Infantryman) between the ranks of staff sergeant and sergeant first class/platoon sergeant. Again, because there are not enough staff sergeant authorizations to meet the requirements at the higher grade, we must fill sergeant first class/platoon sergeant positions with staff sergeants. These limited authorizations also cause a bottleneck between the ranks of sergeant and staff sergeant in this MOS, which means that deserving sergeants cannot be promoted.

In MOS 11H (Heavy Antiarmor Weapons Crewman) there is a large base of staff sergeants supporting a small number of sergeants first class/platoon sergeants. This results in limited promotion opportunities for some very deserving noncommissioned officers.

In an effort to solve these problems, we have conducted an analysis of the Career Management Field (CMF) 11 structure and what might be done to correct them. For an MOS or a CMF to be self-sustaining it must be structured in the shape of a pyramid. Although CMF 11 is generally structured in this fashion, the CMF 11 MOSs are not. And since we now promote by MOS instead of by CMF, this has created a problem.

In our analysis we first looked at TOEs and MTOEs and decided that they should remain as they are so that the units will be structured and trained as they will be expected to fight. Secondly, we considered incorporating some MOSs into others

and using additional skill identifiers (ASI) to correct the problem. We soon realized, though, that certain skills are unique and are not necessarily additional skills within another MOS.

But in studying the Army's tables of distribution and allowances (TDAs), we saw that more than 91 percent of all enlisted infantry authorizations, regardless of grade, were coded 11B, a disproportionate number.

We felt that we could accomplish two objectives at the same time: We could recode certain selected 11B positions as either 11C or 11H positions, which meant that we could not only spread some of the talent we have in 11C and 11H among the TDA positions, we could bring a whole new dimension of experience to our training centers and schools. Secondly, we could simply increase the base of authorizations for staff sergeants in 11C and for sergeants first class/platoon sergeants in MOS 11H without increasing our end strength. (As the 11B positions at staff sergeant level were recoded as 11C, that would automatically decrease the imbalance between the ranks of sergeant and staff sergeant in 11B.)

We then looked at those enlisted positions that are considered infantry but that are still general in nature and are not MOS specific (drill sergeants and counseling, for example) and decided we could recode the ones we needed by grades and MOSs and use them to balance the various MOSs.

While the Infantry Training Center and the Infantry School can accommodate a lot of these proposed changes, it cannot accommodate them all. But we are taking the first step and setting the example so that other TDA units in TRADOC and FORSCOM will follow suit.

Specialty proponency, of course, is not our only task. We at the Infantry School, as do the other service schools, also have proponency for operational concepts, organization and force structure, materiel requirements, doctrine, tactics, training developments, and user testing. We will devote our best efforts to developing and promoting these concepts.

Fort Benning has truly assumed its rightful role as the Home of the Infantry. But the proponency for infantry extends far beyond the boundaries of Fort Benning. As Chief of Infantry I have traveled extensively in the past year in an effort to stay in touch with infantry units around the world. I will continue to do so. And I encourage you to keep up the dialogue with your home, Fort Benning.

Practice Combined Arms.

# INFANTRY NEWS



THE INFANTRY SCHOOL's 1982-1983 Instructional Material Catalog has been distributed to the field. It contains a listing of the instructional material that is available from the School and gives instruction on how individuals and units may get copies of that material.

The Infantry School will no longer publish its Monthly List of Instructional Material (Doughboy). Rather, the School will now publish a quarterly list of instructional material to update the catalog.

Additional information about these various publications is available from the Commandant, U.S. Army Infantry School, ATTN: ATSH-DOT-ETMS, Fort Benning, Georgia 31905; AUTOVON 835-1823/2141, or commercial 404/545-1823/2141.

THE NATIONAL INFANTRY MUSEUM has been given the Department of the Army Community Relations Award of Excellence. The award recognizes the Museum's contributions over the years toward improving community relations between Fort Benning and the surrounding civilian communities.

The award also cited the Museum for increasing the positive recruitment of young men and women for the defense of our nation. The Museum's presentation of a rich military heritage complements the official recruitment program as well as the official training and education program used at Fort Benning.

An example of inter-community cooperation is the reception given by the Friends of the Confederate Naval Museum in October 1982 at the National Infantry Museum for people who wanted to meet a team of underwater archaeologists who had come to Columbus to search for Civil War

artifacts in the Chattahoochee River. A large crowd of people turned out to attend the reception and to hear a talk by Dr. William Still, who headed the team from East Carolina University.

The Museum is available to schools, colleges, educators, and other community groups for tours. Its elegant and spacious facilities can be readily adapted to fit special occasions. For example, an art auction for the benefit of the local Girl Scout council is currently being scheduled, as is a ceremony to honor three-time Combat Infantryman Badge holders.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the Museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is \$2.00 for a one-year membership, or \$10.00 for a lifetime membership.

Additional information about the Museum and the Society is available from the Curator, National Infantry Museum, Fort Benning, Georgia 31905, telephone AUTOVON 835-2958, or commercial 404/545-2958.

A NEW COMMAND, called the 1st Special Operations Command (Provisional), was activated on 1 October 1982 at Fort Bragg, North Carolina.

It is made up of the former John F. Kennedy Center for Military Assistance, which included the 5th and 7th Special Forces Groups, the 4th Psy-

**INDEX**  
The 1982 index to INFANTRY has been prepared separately and is available to anyone who requests a copy. Please address your request to: Editor, INFANTRY Magazine, PO Box 2005, Fort Benning, Georgia 31905.

chological Operations Group, and the 96th Civil Affairs Battalion, all stationed at Fort Bragg. Other units belonging to the new command are the 10th Special Forces Group at Fort Devens and the Ranger Battalions at Fort Stewart and Fort Lewis.

The new headquarters is commanded by Brigadier General Joseph C. Lutz. It is responsible for the preparation, employment, and sustainment of special operations forces in conducting foreign internal defense, unconventional warfare, psychological operations, Ranger operations, and related operations in support of national objectives and military strategy in both peace and war.

GUNNERY TRAINING FOR CREWMEN on the Bradley Infantry Fighting Vehicle (BIFV) will be vital to the success of the units that are equipped with it, because it offers an unparalleled increase in offensive firepower at the company level. The vehicle's turret-mounted weapon systems consist of a 25mm chain gun, a 7.62mm M240C coaxial machinegun, a TOW missile system, and an M257 smoke grenade launcher.

The vehicle also has six firing ports from which the infantrymen in the vehicle can engage enemy targets while on the move. The complexity of training the fighting vehicle infantrymen, MOS 11M, in the effective employment of these weapon systems has created a new challenge for unit commanders.

The principal assistant to the commander in conducting unit gunnery training will be the BIFV master gunner. He will help the company and battalion commanders plan and implement gunnery training programs in their units and will also act as an advisor to the chain of com-

mand on other matters related to the BIFV.

The soldier selected for this job should have at least four years of mechanized infantry experience, including two years of service as a mechanized infantry squad leader or platoon sergeant. He should be a volunteer and should be recommended for the program by his battalion commander. After selection, he will go to an 11-week resident course at Fort Benning. If he completes the course successfully, he should expect to be retained in his unit for at least two years as its master gunner.

In the Fort Benning Master Gunner Course, this gunner will learn maintenance, gunnery, and training skills. The maintenance training is intended to produce, not a mechanic or a maintenance supervisor, but an advisor to the chain of command who can identify maintenance deficiencies that would adversely affect the operationally ready state of the vehicle's weapon systems. The gunnery training will focus on the weapon systems, pre-fire gunnery and training, full caliber gunnery and training, and target engagement.

Then, so that he can train others, the school-trained BIFV master gunner will study the battalion training management system (BTMS), training developments, and the Conduct of Fire Trainer (COFT). He will also receive instruction in BIFV-peculiar NBC tasks and in the fundamentals of moving the vehicles by air, sea, and rail. This instruction, again, is not designed to make the master gunner an expert on these matters, but rather to allow him to function as an advisor on them to the chain of command.

In addition to the master gunner's course, resident instruction at Fort Benning will include two other courses: the gunner's course and the vehicle commander's course, which will also qualify its graduates in MOS 11M.

Gunnery training in these two courses will begin with weapon systems training, followed by pre-fire gunnery, subcaliber training, and full caliber gunnery training. Weapon

systems training teaches basic theory in the functioning of the weapons, in fire control, and in ammunition.

Pre-fire gunnery is the process of performing all the necessary steps just before actually firing a round; primarily, this is the acquisition and identification of targets, the determination of range to targets, the manipulation of the turret, and the utilization of the integrated sight unit (ISU). Actual live-fire training begins with subcaliber gunnery, which gives the gunner or the vehicle commander an opportunity to practice his newly learned skills before he fires full caliber engagements. Subcaliber engagements are conducted in vehicle teams — driver, gunner, and vehicle commander — while full caliber engagements begin with vehicle team exercises and progress to platoon exercises.

At the end of this training the gunner will be able to respond successfully to fire commands issued by the vehicle commander, manipulate the turret correctly, select the proper ammunition, and engage and kill targets. The vehicle commander, in addition, will be able to give precise and correct fire commands, lay the gun on the target properly, and exercise command and control over his vehicle and his squad or platoon.

Graduates of the gunner's and vehicle commander's courses will still need gunnery training once they are assigned to a unit, and this training will be a command responsibility. But the extensive training the master gunner receives through the master gunner's course will fully prepare him to assist the units in their initial gunnery training, their sustainment training, and their transition training.

In addition to the trained gunners provided by the Fort Benning resident courses, the units may want to identify soldiers who have high potential as gunners and give them training in the unit as well. This training and the training for school-trained gunners who need to maintain proficiency will be accomplished through a program of pre-fire gunner training, subcaliber training, and full caliber training. This same program should provide

transition training for personnel who are assigned to fill administrative or combat losses and who have been unable to receive resident course gunnery training. (The M2 gunnery manual that will be fielded with the vehicle has extensive coverage of all phases of gunnery training at unit level.)

The COFT will be a key training device in accomplishing unit gunnery training and evaluation. It consists of three components, which are to be shipped to battalions, squadrons, and combat air assault brigades in three semi-transportable shelters: the turret module, the instructor/operator station, and the computer system.

The turret module, an exact replica of the BIFV turret, offers the gunner and the vehicle commander the use of all the turret weapon systems to engage targets in the closed-hatch mode. The instructor/operator station provides for the real time monitoring and recording of crew performance while attempting an increasingly complex series of tactical gunnery engagements. These two modules are linked by the computer, which controls student engagements through commands from the instructor/operator.

The unit version (U-COFT) will enable units equipped with the BIFV to conduct high fidelity training for initial, sustainment, and transition gunnery programs without the problems associated with subcaliber or full caliber training. The COFT will also be used at Fort Benning, Fort Knox, and the 7th ATC for instruction in resident courses.

Soldier's manuals, job books, trainer's guides, and a gunner's manual are being developed for fielding to the first units to receive the BIFV. These and other training literature developments will provide a full range of supporting documentation for soldiers using the new gunnery systems and the associated equipment on the vehicle.

The BIFV clearly provides fire-power and protection for the fighting vehicle infantryman and makes him more effective on the battlefield than ever before. The key to its successful

employment will be in the way the fighting vehicle infantryman is trained to use his weapon systems.

THE WEAPONS, GUNNERY AND MAINTENANCE Department, USAIS, offers its assistance to the field on numerous topics of interest that fall into its area of responsibility.

Anyone who has questions or suggestions on the Department's areas of training may call and talk to the following subject matter experts or write to Weapons, Gunnery and Maintenance Department, USAIS, ATTN: ATSH-W-A, Fort Benning, GA 31905.

SME	TELEPHONE (AUTOVON) AC 404
<b>Infantry Mortars:</b> FDC Mech Training	SFC Wilder SSG(P) Despain
Weapons: Antimor Small Arms ITV	SFC Jones SFC Souerwina SFC Bowling
Maintenance: Forms and Records Repair Parts Supply	SSG Messoni SSG Simpson
	(784) 544-1367 (784) 544-1260 (835) 545-3069 (835) 545-4242 (835) 545-3069 (784) 544-6366 (784) 544-6366

A LIGHT ARMORED VEHICLE to serve both the U.S. Army and the U.S. Marine Corps — the LAV-25 — will be produced by General Motors of Canada as prime contractor. (See accompanying photograph.) The Infantry School is the proponent for the Army's LAV.

The LAV-25 will provide mobile, armored firepower for the Army's light divisions. It weighs 14.1 tons, travels more than 60 miles per hour, swims at 6.4 miles per hour, gets 5.9 miles per gallon at 35 miles per hour from its 275-horsepower turbocharged diesel engine, and has a cruising range of more than 400 miles. It can be transported by C-130, C-141, and C-5 aircraft, and it mounts the highly effective Bushmaster 25mm rapid fire automatic cannon. It has a crew of three — driver, gunner, and commander.

The vehicle also has a 7.62mm (NATO standard round) coaxial machinegun and can travel a distance of five miles with all of its eight tires flat. It can also cover 25 miles at 30



miles per hour with all of its tires on one side flat.

The LAV-25 is scheduled for further operational testing (OT IIA) at Fort Benning from 31 January 1983 to 11 March 1983. The Infantry Board will conduct the test to obtain data and information from which to assess the vehicle's fighting prowess and safety, its tactical transportability, its availability and maintainability, and its logistic support requirements.

The Army plans to buy a total of 680 LAV-25s over a five-year period, 60 during the first year. The vehicle is scheduled to be issued to field units in 1985.

THE ARTILLERY DELIVERED expendable communications (barrage) jammer (EXJAM) recently underwent successful engineering tests. For the tests, jammers were loaded into 155mm cargo rounds and fired at various ranges.

Under the EXJAM concept, several jammers are loaded into one round. During flight, the round's base plate is blown off and the jammers are ejected, one at a time, according to preset timers.

As a jammer, or puck, clears the projectile, fins deploy and a streamer orients it to the ground.

The puck strikes the ground at a velocity of about 30 feet per second and is imbedded one to three inches into the ground at the proper angle. An antenna/ground plane is then deployed and within seconds a trans-

mitter is automatically turned on and the jamming begins.

A later series of tests will involve 1,000 of these jammer units.

THE ARMY HAS AWARDED a contract for the production of four Lighter, Air Cushion Vehicles, LACV-30s.

Each vehicle can carry two 20-foot MILVAN containers with a combined weight of 30 tons. It can also carry wheeled and tracked vehicles, engineer equipment, pallets, and other cargo.

Since it rides on a cushion of air, the craft can operate on water, in marginal areas, on beaches, and over



ice and snow. It will be used for over-the-shore logistics missions, in combat service support operations, for search and rescue and medical emergency missions, and to support secondary missions in coastal, harbor, and inland waterways.

The Army plans to purchase eight more of these vehicles. The first LACV-30 is scheduled for delivery in February 1984. All 12 craft are expected to be completed by November 1986.

NEW WEAPONS THAT WILL change both the complexion and the conduct of future warfare have been much discussed lately. Collectively, these weapons are called directed energy weapons (DEW); they include three major systems: lasers, radio frequency (RF), and particle beam weapons (PBW). Between 1982 and 1985, the Soviets are expected to be able to field some of these systems as battlefield weapons.

• **Laser.** The laser (Light Amplifi-

cation by Stimulated Emission of Radiation) is the oldest and best understood of these systems. In oversimplified terms, the laser is similar to a flashlight but with a much smaller and more intense beam. When the beam hits any unprotected optical surface, such as that on binoculars, damage will occur. If the laser is of a frequency that will pass through the optic (the lens), it will do so and damage the eye of the soldier who is using the binoculars. This is called "in-band" damage. If the laser is of a frequency that will not pass through the lens, it will deposit its energy on the lens itself. When this happens, the lens becomes "crazed" (frosted like the glass on restroom doors). This is called "out-of-band" damage. In either case, the soldier is neutralized because he cannot see.

Currently, no Soviet laser weapons are known to have been fielded. But laser rangefinders, such as those found in artillery units, on aircraft, and on some tanks and BMPs, can also cause damage to optics and to the human eye.

• **Radio Frequency.** While the technology for developing laser weapons has been available for some time, such is not the case for RF weapons. Like the laser, an RF weapon produces a beam of narrow band, coherent electromagnetic radiation, but at radio (not optical) frequencies. An RF weapon places enough radio frequency energy on a target or a weapon system to either degrade or destroy a target's electronic circuitry, thereby causing it to fail.

RF targets include fire control systems, surveillance radars, ordnance fuzes, communication systems, avionics, and radar or electro-optically guided munitions. Damage to those targets occurs if the RF energy enters the target's electronic circuitry through an antenna (called "front door" coupling) or through power supply leads and apertures or through cracks in the equipment's housing (called "back door" couplings). The damage effects range from temporary upset to permanent burnout.

Unlike the laser, the radiated energy from an RF weapon takes the form

of a wide cone so that at any significant distance the beam covers a large area; precise pointing and tracking, therefore, are not needed. Too, RF radiation is not as severely weakened in adverse atmospheric conditions (fog, haze, aerosols) as is a laser beam.

• **Particle Beam Weapons.** Contrary to the impression that has been conveyed by recent public statements, the Soviets do not now have the technology to build a particle beam weapon. Furthermore, a PBW probably will not become available for several years because of the difficult and still unsolved physics and technological problems involved in producing such a weapon.

A PBW for tactical application would generate a high-current and high-energy beam of electrons and would project this beam at targets no more than a few kilometers away. Its major advantage over the other directed energy weapons lies in its target damage capability: Because its high-energy particles could penetrate most materials to substantial depths, it would be most difficult to shield a piece of equipment against its effect. And a PBW would not be restricted by poor weather conditions. Its major disadvantage would be its relatively limited range and its large size.

The Soviet Union is conducting extensive research in all of these areas of directed energy. If important weapon systems result from that research, present day conventional weapons could go the way of the bow and arrow. (*This news item was prepared by Captain Tom Miller, Threat Branch, USAIS.*)

**THE ARMY HAS REFINED ITS Skill Qualification Test (SQT) program.** The refined program still requires an annual formal test, but it now gives commanders the opportunity to evaluate their soldiers' proficiency informally as well. It also places added emphasis on common tasks and the basic soldier combat and individual skills. Its key features are simplified administration, greater flexibility for commanders, and more effective evaluation tools.

The refined program has three parts: a common task test, a unit-selected hands-on evaluation, and a written SQT. The common task test is based on the Soldier's Manual of Common Tasks, FM 21-2, and, ideally, each soldier from Private-1 to Sergeant First Class will take it annually, although the frequency may vary in the Reserve Components.

The check list used to give the common task test is being incorporated into the Soldier's Manual of Common Tasks. The common task test, which is a hands-on test, will also have a written backup test for units that do not have the necessary equipment.

The hands-on evaluation part of the refined program also applies to all soldiers from Private-1 to Sergeant First Class. Commanders have total flexibility in choosing Soldier's Manual tasks for hands-on evaluation and for conducting the evaluation.

Hands-on evaluation check lists are being included in the Soldier's Manuals just as they are for the common task test. Commanders can use the manuals both to conduct training and to evaluate their soldiers. They may even conduct their evaluations during ARTEPs, deployment exercises, or routine training periods. The test results will not go outside the unit.

Until all the Soldier's Manuals can be revised with the hands-on check lists included in them, TRADOC will produce supplements to the manuals.

The test will now last about two hours and will evaluate from 16 to 37 Soldier's Manual tasks, depending on the particular MOS that is being tested. Too, the test period has been reduced from nine to three months.

The amount of material in the test notification has been drastically reduced, and the test notice now consists of only a task list about two pages long.

The current three-component SQT will be phased out completely by 30 June 1983, and the new common task test will begin in March 1983. DA Circular 350-82-3 contains the entire Fiscal Year 1983 SQT schedule.



## Values and Discipline

DANDRIDGE M. MALONE

Of all the thousands of things that come under the heading of "Leadership," what is it that's most important? The answer is simple: the soldiers' values. This is true because soldiers' values build discipline, and there cannot be such a thing as an Army without discipline. Unfortunately, though, there are no step-by-step instructions on how you can promote values.

But, for starters, go find a handful of unit crests and read the words on them. What those mottos say is what those different units want to be, what they aspire to, how they want to be known, what they want to be known for, what they want their reputation to be based on, and what people can expect of them. Those words tell you what's important in those units, and that's all soldiers' values are — a few words that describe what's important in an outfit.

If you think back to one of the best units you've ever been in, you'll probably find that you can recall the words of the unit's motto. And if you think a little more, you'll remember that there were times when those words gave you some guidance about what you, as a member of the outfit, should do. The words helped you make decisions, and helped you fig-

ure out what was right. Values still lead leaders to do the right things. And they lead soldiers to do the right things.

Any unit or organization must have values — a few words that say what's important for that outfit and that lead leaders to make the right decisions and to do the right things on their own.

### FOUR WORDS

Our Army's purpose is to fight and win the land battle. That means our Army's purpose gets accomplished at one specific place — on the battlefield. And that means that our Army's values must serve some function when the unit fights. Many experienced combat leaders feel there are about four Army values that do this. Only four words, but they represent what we want our Army to be, and they describe what our nation expects of our Army. The four words are candor, commitment, courage, and competence. Each one affects the others. They are what you must build into the man called a soldier.

*Candor* is not a strong word, but it means openness plus honesty plus simplicity. On the battlefield, it is the

prime rule that governs communications among men. It operates to ensure the best possible transfer of meaning among people. The stakes are too high, and time is too short to experiment with anything but the essence and the truth. Men in battle can't be concerned with little white lies, and private secrets, and little games. The communication of facts, and of feelings as well, must be clean, simple, whole, accurate.

The candor of the battlefield serves to develop and support the trust upon which men's commitment to each other is built. The candor of the battlefield is why buddy groups form there so quickly and permanently. The battlefield has to be the most honest place in the world, because lies told there are punished not with gossip but with action.

Battlefield *commitment* is given mainly to men and groups of men, far more than to things. For the soldier, it is commitment first to his buddy, then close after that, commitment to his squad or his crew. There may be some commitment to larger units and a little to the nation, but not near as much as to the buddy and the squad.

This value helps provide security, which comes from mutual trust. It also serves as the central foundation

for teamwork and coordination. Fire and maneuver and combined arms teamwork — the underpinnings of the whole way we fight — are functions of the strength of commitment to men and groups of men, commitment to each other, and to the "US" in U.S. Army.

A leader's commitment to his men focuses downward, to the troops. In some strange but somehow essential way, the strength of this downward commitment often decreases as the rank of the leader increases. In a way, as rank increases, the commitment to men begins to change into a commitment to purpose or mission.

*Courage* means taking a risk, even though the choice not to do so may be open. On the battlefield, the risk is a total-loss risk, and yet, for various reasons, the soldier himself decides that the total-loss risk may be his own best choice. This risk-taking is the ultimate definition of soldier. That's why some people say that to be a soldier is "the noblest act of mankind."

Courage, in individuals, turns the whole action on. An action cannot start without courage being shown by some individuals. That's what battle leaders do, and what the green tab is supposed to mean, and why setting the example is always so important. Further, a battlefield action cannot

continue to its conclusion unless courage continues to be shown, not just by the leader but by all involved. In battle, courage grows from an individual trait into a unit process. There is something contagious about courage, and it spreads most rapidly in cohesive units.

*Competence* is the oldest value on the battlefield. Even ten thousand years ago competence determined which side won.

Competence is also the central value, since the other three are linked to it. On the battlefield, candor is important only to ensure the accurate transfer of meaning about the changing status of competence. Competence is the basis for skill and for confidence in one's self, which is where courage comes from. Competence is also the basis for confidence in others, which establishes commitment, since the patterns and the strength of trust and mutual support are formed on the basis of where and in what degree competence lies.

On the battlefield, it is competence that establishes status, and so the patterns of strong informal leadership that actually control the action may or may not correspond to the formal pattern or the actual chain of command. This, of course, depends on the competence of each of the members of the formal chain.

On the battlefield, a soldier's subordinates, superiors, and buddies value competence more than any other attribute, except courage.

And that's what those four Army values do on the battlefield. How can they be used in developing leaders? Well, think a moment about the traits of a leader. Those four words summarize these traits. Then think about the principles of leadership. Those four words also summarize these principles. Since this is so, and since you're a leader, and since you know the best way to lead is to set the example, then develop your subordinate leaders by showing them what those values look like when a leader leads — when *you* lead.

If they do like you do then every soldier in the unit will begin to understand what's important. And the more that happens, the greater the chance that every soldier will do the right thing on his own. And isn't that what discipline means?

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## Prepared to Fight

LIEUTENANT COLONEL JOSEPH J. ANGSTEN, JR.

It is generally agreed that the extended battlefield of the future will require infantrymen who are mentally and physically prepared to fight continuously against a determined foe. The stamina and concentration of our

front line troops, therefore, will be critical to their success in battle.

Accordingly, a physical training program for our soldiers who are expected to confront a major enemy force in the initial battle of the next

war must be designed to increase their confidence in themselves and in their buddies.

This does not mean that our soldiers should spend four to six hours a day doing physical training

under the worst possible conditions. It does mean, though, that they should do more than run two miles a day and do 25 or 30 pushups and 40 or 50 situps.

For example, every infantryman should do more physical training while carrying his individual weapon and wearing his load bearing equipment (LBE). Thus, with his weapon and LBE he could be required to jog two or three miles, or go through a confidence course, or run a bayonet course. Although some people might consider bayonet training outdated, this is one of the best ways for infantrymen to develop a solid foundation of individual and collective confidence in their physical abilities and their leadership abilities. Conducting extended foot marches in connection with tactical exercises, training in hand-to-hand combat, and rotating junior leadership positions are some

of the other things that can be done to improve the fighting qualities of any unit.

A fear has to be instilled in the enemy soldier, a fear that will inhibit his mobility and his reactions. Our front line soldiers can help bring on that fear by demonstrating their determination and their fighting abilities.

To be able to do this, they must be mentally and physically prepared to face and overcome at least three or four enemy soldiers each. Their smart and confident use of their individual and crew-served weapons and their bayonets should help reduce any unfavorable odds they may face. Individual initiative must also be encouraged, because once the battle is joined, the front line infantryman's actions, working either as an individual or as a member of a group, may well carry the day.

In a peacetime environment, infantrymen must project an image of strength and determination. If called on to do battle, they must couple that image with courage and determination to fully support the Army's mission to fight and win. For that is the culmination of the front line infantryman's role on the extended battlefield, which is, as it has been on every battlefield throughout history, to close with and destroy or capture the enemy.

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## Train to be Miserable

MAJOR TIMOTHY P. MARONEY

Some commanders and trainers honestly believe that "you don't have to train to be miserable." I think you do. A battlefield is a hostile environment, and success in that environment does not come without a great deal of misery, hardship, and self-denial. Only the soldiers and units that are hardened, disciplined, and conditioned to function effectively under the most adverse and demoralizing conditions are going to be able to win through to victory.

Unfortunately, our people, for the most part, are not accustomed to misery, hardship, and sacrifice. We live in an environment and an era in

which pleasure-producing products and services abound, and we're glad we do. But this comfortable, almost opulent lifestyle will put us at a great disadvantage on a battlefield if we are ever pitted against a determined enemy whose entire culture revolves around sacrifice and hardship.

Accordingly, our infantry commanders must begin today to train and condition their soldiers to function under the most miserable conditions; they must train their units to be miserable so that they will be prepared to deal with the problems associated with battlefield misery. They should plan a training program

that will progressively and systematically introduce elements of misery. Units can then move on to higher levels of misery by accomplishing given tasks under increasingly difficult and demoralizing conditions.

Veteran infantrymen can readily identify most of the elements of misery a unit can expect to meet in combat: prolonged adverse weather conditions, lack of food and equipment, loss of a respected leader or comrade, fatigue, extended marches over unfamiliar or hostile terrain, boredom, and uncertainty, among others.

The common denominators that

opposing forces share on a battlefield are the terrain on which a battle is fought and the weather conditions that prevail at the time of engagement. Within this fixed framework, assuming the sides are evenly matched, certain variables will determine the winner and the loser — the principles of war that the leaders apply and the level of troop proficiency on each side. The units that are prepared, disciplined, and trained to carry out their missions under the most adverse, demoralizing conditions will have a distinct advantage over those that have not been conditioned to the hardships of a combat zone.

Training to be miserable could be accomplished within the existing framework of the Army Training and Evaluation Program (ARTEP) structure. For example, unit commanders and trainers could control and evaluate a unit's demonstrated ability to function under increasingly difficult conditions simply by modifying the conditions under which each task is accomplished. In ARTEP 7-15, The Rifle Squad, the forced march/live fire exercise can be used to illustrate this point most graphically. The task for Levels 3 and 1 could remain the same: to conduct a forced

march and a live fire exercise during daylight. Only the forced march distance would change between the two levels. The distance of 6 kilometers for Level 3 would double to 12 kilometers for Level 1. The evaluation standards between the two levels could be changed so that an extra hour would be allocated for the march, and the percentage of target hits during the live fire exercise could be made higher.

Thus, for all ARTEPs, the same task and evaluation standards could be maintained; only the conditions would change. After achieving Level 1 satisfactorily, for example, the unit could undertake the same missions during hours of darkness or limited visibility. Then it could try to accomplish the mission on a rainy night simulating at least one wounded team member. The soldiers might also try doing it with empty bellies and crossing unfamiliar terrain. These are conditions that unit commanders and trainers at all echelons could easily program into their exercises. Such variables as training locations, the time of day, the season of the year, and the duration of the training periods are controllable and could be programmed in a "misery escalation planning schedule." The absence of

precise long range local weather forecasts might preclude exact scheduling when that particular "element of misery" is called for, of course, so there would have to be a certain amount of flexibility in any planning cycle.

Our present tactical doctrine calls for our units to undertake offensive operations to control the combat zone. Accordingly, adverse weather and terrain conditions can actually assist an attacking force. In bad weather, defending forces often instinctively seek creature comforts, let their guard down, and lie vulnerable to surprise, enabling a well-trained, offensive-minded unit, secure in its abilities, to outwit, confuse, and destroy them, even when they are otherwise superior.

My proposal, therefore, is a simple one — let's train to be miserable!



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## PMCS versus GITI

CAPTAIN ROBERT R. LEONHARD

Without a doubt, the longest nights for a mechanized infantry company commander in garrison are those immediately preceding an annual general inspection (AGI). And on those nights he probably spends more time worrying about his motor pool than about any other part of his com-

pany. The reason for this is that the company's maintenance managers seem to wait until the last minute to solve their problems. The company may pass its AGIs most of the time, maybe all of the time, but between AGIs the motor pool still has those problems.

Of course, the company commander is responsible for making sure that his equipment is ready for combat and that his troops are trained in combat maintenance. He must also attain such tangible peacetime goals as passing AGIs and roadside checks and having good mission-

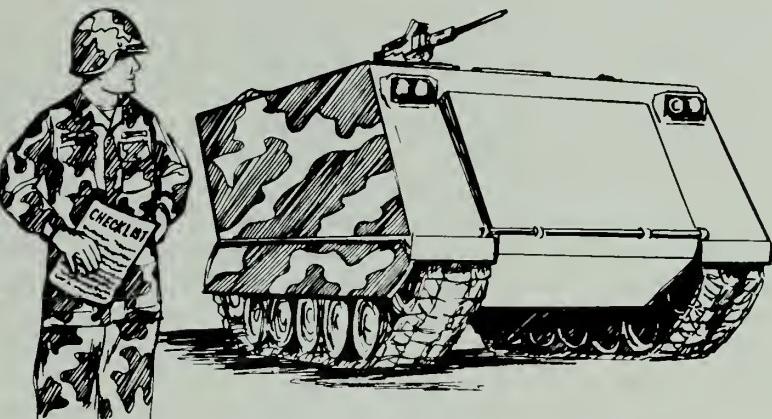
capable vehicle rates during field exercises. In his attempt to meet these responsibilities, he depends to a large extent on his chief maintenance manager — his motor officer.

Both of these officers have a readily available solution to all of their maintenance problems if they will just use it. The solution is PMCS, or Preventive Maintenance Checks and Services. Unfortunately, though, too many motor officers have not had the time to master TM 38-750 before assuming their duties. Even more unfortunate is the existence of another system that regularly competes with PMCS in almost every motor pool, a monstrous system known as the GITI — the Government Issue Technical Inspection. This is an unauthorized and generally overlooked activity in which a soldier inspects a vehicle without using the operator's manual for that vehicle.

Having served in several capacities in a mechanized infantry company and as a battalion motor officer, I have seen GITI at work many times, and I consider it a mortal enemy. Although the soldiers I have observed doing a GITI have picked up some of the problems with their particular vehicles, too often they have missed almost as many more. So why do we allow it in our motor pools? I'm afraid it's because of ignorance on the part of those of us in the chain of command.

As a new second lieutenant, I was hesitant to say anything or to ask any questions in the motor pool. I thought I was expected to know all there was to know about my platoon's four M113s. But this is not true. No one is expected to come to a unit carrying in his head a -10 or -20 manual for each vehicle. That's why these manuals are kept in the vehicles. The prudent course for a new officer to take is first to admit his ignorance to himself, and then to learn by reading and doing.

PMCS for the operator and crew of a vehicle are explained in the applicable -10 technical manual. Additional guidance can be found in AR 385-55 and in the somewhat more specific lists of vehicle *dos* and *don'ts*.



that are published by every post Inspector General's office. Anyone who can read can service and inspect a vehicle if he will use these documents. The most common failure I found in managing my platoon's maintenance effort on our M113s was the failure of the operators and the crew members to use the manual and to do everything outlined in it.

For example, a squad leader once told me that the before-operation checks had been completed on his vehicle. But when I asked the driver if he had started the vehicle, he said he had not. And to complete the before-operation checks on the M113A1, the engine must run from 6 to 10 minutes to warm the oil. Obviously, someone had failed to read the manual.

Here's a simple test you can use if you think you have a similar problem with your platoon's tracks. Ask your drivers to point out the primary and secondary fuel filters. You might be surprised at how many of them do not know where (or what) those filters are. Yet draining them is an after-operation service that should be performed every day.

A PMCS performed by a driver must be properly recorded on a DA Form 2404. For a maintenance manager, this is an invaluable form. He must see that the drivers use the item numbers from the technical manuals when they fill out their 2404s. This not only impresses on the drivers the need to use the manuals, it also enables the maintenance super-

visors to determine whether the drivers have performed all the services completely.

The maintenance supervisor, in turn, must sign his block on the form. A 2404 should not be accepted unless the supervisor's signature is on it. (The supervisor might be a squad leader or, in his absence, a platoon sergeant.)

Finally, the company motor officer should screen all of his 2404s before he gives them to the motor sergeant. This step is most important. It enables the motor officer to check for complete entries on the form, and he can evaluate at a glance the thoroughness of the services that were performed. If he is not satisfied, he can stop the processing of what is probably a worthless form before the motor sergeant wastes his time on it. But if the motor officer is satisfied with the form, he should initial it and give it to the motor sergeant for processing.

I occasionally spot-checked a driver's 2404 against the results of my own inspection. If I found a deficiency that he had failed to detect, I would direct the platoon sergeant to assemble the platoon after duty hours to pull a proper PMCS on the platoon's vehicles. After only a few repetitions of this, I was rewarded with well-executed, efficient motor stables.

Field maintenance presents certain other problems. In garrison, for example, it is proper to allow one man,

the driver, to maintain a squad's vehicle (under proper supervision, of course). It may even be necessary for one man to do it, because in garrison operations, many of the soldiers in a squad are frequently detailed to other duties during motor stables. But during field operations most of the squad members are usually available when maintenance is required. Field maintenance, therefore, should be a crew responsibility. There are other reasons for this as well.

It takes one man from 20 to 40 minutes to pull a good PMCS under the right circumstances with the proper resources. In a field environment, a squad seldom has that much time for vehicle maintenance, and several men can service a vehicle much more quickly than one man alone can. Besides, levels of fatigue are higher in the field, and one man

working alone is seldom able to service and inspect his vehicle efficiently on a routine basis.

Here is one example of what a squad SOP for field maintenance might look like:

- The driver checks transmission, engine, fan tower, transfer gearcase, and hydraulic fluids. He also works the lights and observes the gauges, indicators, and the like.

- The track commander checks the engine compartment from the crew compartment for fuel leaks and any other problems. He also drains the fuel filters and checks the cupola and the armament.

- One man checks the differential and the final drives and services the air cleaner element from the front. He also checks the front lights.

- One man services the radios, fire extinguishers, batteries, and rear

lights and inspects the ramp.

- Two men (one on each side) maintain the tracks, the suspension systems, and the shrouds.

- The squad leader supervises all of the above actions and fills out the 2404.

These suggestions may help you in your maintenance effort. They will certainly help you to stamp out that monster — the GITI.



**CAPTAIN ROBERT R. LEONHARD** recently completed the Infantry Officer Advanced Course and is now in a degree-completion program at Columbus College in Georgia. He previously served as leader of a rifle platoon and a weapons platoon, as a company executive officer, and as a battalion motor officer.

## Mortar 86

LIEUTENANT MARK L. TORREY

One of the key elements in the Army's new Division 86 organization — the mechanized infantry division — is the single-function unit, a unit that has only one major weapon system and one that should, therefore, be more flexible and maneuverable. One of these single-function units will be an infantry mortar platoon in which all the infantry's mortars are consolidated at battalion level. Each mechanized infantry battalion will have a six-tube mortar platoon in its headquarters company.

Unfortunately, the concept of this new platoon leaves a lot to be desired in organization, in doctrine, and,

most of all, in the mortar itself.

The new platoon is supposed to be equipped with the British 81mm mortar, the XM252, and this is a mistake. I feel that our own 4.2-inch mortar, the venerable M30, should be kept, because it has many advantages over the XM252 and only a few disadvantages. The advantages are that its illumination round is one of the best of its kind in the Army's inventory; its white phosphorous round is twice as effective in producing smoke; its high explosive round is far superior; and it is the only mortar we have that has a chemical round.

As for its disadvantages, it does have a lower rate of fire than the

XM252, but in a 10-minute barrage, the explosive weight delivered by the XM252 is only three-fourths that of the M30, even though it uses more than twice the number of rounds in that time. Besides, in most cases, a few more powerful rounds are more useful than a large number of less powerful ones.

The M30 is also a heavier weapon, but in a mechanized infantry unit this should not be a critical factor, because the mortar is seldom moved from its carrier anyway. And with its range of 7,000 meters, it gives a battalion commander a means of engaging deep targets with a powerful round.

With a few improvements, the M30's capabilities could be increased considerably. The new M734 multi-option fuze — with its four height-of-burst settings, which can be set by hand — could be adapted to the M30's high explosive and white phosphorous rounds. It should not be too difficult to develop a new fuze for the mortar's illumination round, one with a luminous scale that could be set by hand, and this would reduce the amount of time it takes to fire the illumination rounds.

The mortar platoon's proposed organization should also be changed. The platoon should be a cross between the present 81mm mortar section and a field artillery battery, and it should have a headquarters element and two gun sections. Each gun section should have three five-man mortar squads, each with its own M106A2 carrier. The section's fire direction center (FDC) should have its own M113A2 vehicle and should have three mortar computers (one to use as a back-up or in the event the section had to be split). It should also have an M2 aiming circle and a three-net radio capability.

The headquarters elements should have two vehicles: an M113A2 for the platoon leader and an M548 to carry additional ammunition and to act as a resupply vehicle, manned by the platoon sergeant and a driver. The platoon leader's vehicle would double as the unit's reconnaissance vehicle. (The platoon leader should also have an M2 aiming circle in the vehicle to

help him prepare new firing positions.)

The ammunition and resupply vehicle is needed because the platoon's mortars often will use large amounts of ammunition in a short time, and a battalion commander may be reluctant to part with a vehicle from his support platoon to take ammunition to the mortars. It is conceivable that eventually the mortar platoon will need its own full-fledged ammunition section.

Our mortar doctrine, which is essentially the same now as it was in World War II, Korea, and Vietnam, needs to be reexamined, too, in light of the new organization. For example, the mortars should be used in much the same way as artillery is used. They should never be placed in reserve but should be kept where they can always provide support. And they should not be kept in one place for too long, either; they should fire a few missions from one location and then move to another one. They should also be kept dispersed as much as possible, and their crews should do everything they can to conceal their firing positions.

Because mortars are not fast or accurate enough for destruction missions in a mechanized battle, their primary mission should be to provide quick, responsive, suppressive fires, including smoke and illumination. Precision mortar missions, in fact, should be done away with. Registration, meteorological messages, and mean point-of-impact registration

take too much time. Usually, the only reason mortars register is to parallel the sheaf, and this should not be necessary if the crews boresight and lay in carefully. Besides, a perfectly parallel sheaf is not really necessary for suppressive fires.

If the mortars are to concentrate on firing suppressive missions, though, the present authorized ammunition mix must be changed. Currently, the basic mortar ammunition load consists of 70 to 80 percent high explosive rounds. This should be reduced to no more than 50 percent, and the number of white phosphorous rounds should be increased proportionally. In fact, smoke missions will be among the most important of all mortar missions on a mechanized battlefield.

Much can be done to make our mortars more responsive and more flexible. Now is the time to reconsider which mortars to use, how to organize them, and how to employ them. Hopefully, the few ideas presented here will start the process and call forth further discussion.

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LIEUTENANT GENERAL A.S. COLLINS JR.  
UNITED STATES ARMY, RETIRED

# WALTER KRUEGER AN INFANTRY GREAT

The first time I saw General Walter Krueger was on Luzon, where he was the Sixth Army commander. The morning after we had made a night attack and seized a long bridge intact at Aringay, he visited my regiment, the 130th Infantry. We walked around a churchyard where my mobile command post was located, and he asked questions about the operation. As we talked, it was obvious to me that he was taking everything in, sizing everything up — vehicles, wire, weapon positions, the condition of the men and the equipment.

He headed for a mortar position and asked a few of the questions that, I was soon to learn, he asked all soldiers — when they last had had a hot meal, how often they were resupplied with clean fatigues, and other ones that showed him whether their commanders were taking proper care of them. Finally, he asked one of the crewmen, "How can you tell whether you hit anything when you fire that mortar?"

The soldier looked directly at General Krueger. Pointing to a hill, he said, "General, we have an observer up there, and when he calls 'em, we hit 'em."

The General reached over, patted the young man on the shoulder, and in that quiet and reassuring voice he always used when he talked with enlisted men, said, "Son, you're all right."

I saw General Krueger several times after that, and he impressed me always as the finest general around. I was hardly alone in my admiration and respect for him. He was, for many of us, the ideal of a soldier and a leader. The enlisted men, in particular, had a special affection for him.

By the time he retired after 48 years of service in the United States Army, a veteran of the Spanish-American War, the Filipino Insurrection, and the two world wars, he had commanded every kind of unit from a squad to a field army made up of three corps, ten divisions, and 250,000 men. In addition, he had performed a wide variety of duties during his remarkable career — corps G3 in the American Expeditionary Force in World War I, chief of staff of the AEF Tank Corps, instructor at the Naval War College, and Chief of the War Plans Division of the War Department General Staff.

General Douglas MacArthur once said of Krueger, "No army in military history ever had a greater leader." Yet for some reason Krueger has failed to receive the public recognition and acclaim due him. He deserves better treatment.

Walter Krueger was born on 25 January 1881, in Flatow, West Prussia — now Zlotow, Poland. His father, a prominent landowner who served as a captain in the Prussian Army during the Franco-Prussian War, died when Walter was about four years old. His widowed mother, the daughter of a physician, brought him to the United States several years later and settled in St. Louis, where her uncle owned a brewery. Soon afterward, she married a Lutheran minister who had also come from Germany.

The family moved to Illinois and later lived in Madi-

son, Indiana. Walter received intensive tutoring from his stern and demanding stepfather and developed from it an unusually broad background in mathematics, languages, and the classics. From his mother, an accomplished pianist who gave music lessons to help support the family, he learned to play the piano. Throughout his life, intimate friends who heard him play considered him a very able pianist.

He attended public schools and graduated from high school, after which he spent two more years at the Cincinnati Technical High School to prepare himself for college and a degree in engineering. He left school when the Spanish-American War broke out and enlisted in the volunteers for overseas duty.

## MILITARY SERVICE

In 1898, Krueger served as a noncommissioned officer in Cuba with the 2d U.S. Volunteer Infantry. Mustered out in February 1899, he joined the Regular Army four months later. He soldiered in the Philippines and participated in numerous engagements as a private, corporal, and sergeant with the 12th Infantry.

His efficiency reports were good — he was thorough, strove for perfection, maintained high standards of duty and discipline, and was concerned for the welfare of his men. In fact, his record was so good that in June 1901 he was commissioned a second lieutenant in the 30th Infantry.

Returning to the United States in 1903, he attended the Infantry and Cavalry School at Fort Leavenworth, completing the course as a distinguished graduate in 1906. This started him up through the Army's schools to the highest level. As a matter of fact, when he was 46 years old, he attended the Air Corps Primary Flying School.

Always an avid reader, Krueger was interested in the fields of science, literature, and philosophy. His primary interest was military history and strategy, and he became known in the Army not only as an expert on discipline and training but also as a historian and scholar of military affairs. In fact, he translated and published several classic German texts on tactics and operations.

He was fluent in French, Spanish, and German. The German came naturally, of course, because of his early years in Germany and living in a German-speaking household, but he never spoke English with an accent. He was quietly proud of this achievement.

As a field commander, Krueger never had a plan, as such, drawn up. Rather, when his staff submitted a field order to him for approval, he considered the plan. And when he signed it, it became the order. This process saved much staff work, but it was a method of operation rarely understood at General MacArthur's headquarters.

Krueger's superb memory was legendary. In 1933, when Lieutenant Oren Hurlbut, a newly commissioned officer, reported to the 6th Infantry at Jefferson Barracks, Missouri, Krueger was in command. Soon after,



Major General Walter Krueger, Commander, 2d Infantry Division, Fort Sam Houston, Texas, 1939.

Hurlbut hurt his knee in a pickup football game. Krueger appointed a line of duty board on the accident, but his main concern was that the young lieutenant was going to miss a great deal of training.

Twelve years later, in February 1945, Hurlbut, by then a colonel, was outside Sixth Army headquarters in San Fernando in the Philippines when Krueger approached. After they exchanged salutes, Hurlbut was surprised to hear Krueger ask, "How's your knee? Does it give you any trouble?" Hurlbut could only reply, "No, sir, it's fine."

Under Krueger's careful supervision, nearly a million men trained for war. He stressed the practical fundamentals of good soldiering and insisted on good leadership at all echelons of command. Famous throughout the Third Army was his Junior Officers Training Center at Camp Bullis, Texas. Here, young officers received six weeks of the most intensive training. They removed their insignia of rank, donned fatigues, and performed all the tasks normally done by enlisted men.

To one of the camp's graduating classes, Krueger said:  
*Gentlemen, you have ended today six weeks of very*

*hard work. I know that it is hard, because I have made it my business to see that it was just that way. If it had been humanly possible, I would have made it even harder . . . Take pleasure in a hard job well done; there is no greater satisfaction.*

During the Louisiana maneuvers of 1941, he drew "national attention by his bold and aggressive leadership in seizing the initiative" as his Third Army overran the opposing forces in a daring offensive.

General Krueger was still commanding the Third Army in January 1943 when General MacArthur asked General George C. Marshall, the Army's Chief of Staff, to move Krueger and the Third Army staff to MacArthur's theater, the Southwest Pacific Area. Krueger later said that the opportunity was "most welcome, but wholly unexpected." He went on to say, "I had about concluded that being practically sixty-two I would be thought too old for active overseas service." Although the transfer of the Third Army headquarters was disapproved, Krueger was sent anyway with orders to activate Sixth Army headquarters.

The nucleus of Krueger's Sixth Army staff, though,

did come from Third Army headquarters in San Antonio, Texas. That the officers were good was proved by the later careers of many of them. George Decker, the chief of staff, later became Chief of Staff of the Army. Eddleman, the G3, later rose to be Vice Chief of Staff of the Army. Sturgis, the engineer, was later the Army's Chief of Engineers. Kiefer, the artillery officer, became a division commander. Reichelderfer, the signal officer, later, as a major general, commanded the huge training center at Camp Roberts, California, during the Korean War. There were many others, too, especially among the younger group, who went on to enjoy successful military careers, men such as Weyrauch, Tolson, Gray, Turnage, Ely, and West.

## THE MEN

Throughout his career, one of Krueger's prime concerns was the treatment of the men in the field. During the war, he invariably checked messes to ascertain the quality of the food that was being served to the soldiers. One morning at a division headquarters he had fresh eggs

for breakfast. While visiting units in the forward area later in the day, he asked the men whether they had had any fresh eggs lately. The soldiers laughed and thought that was a great joke. But it was no joke for the division commander, because General Krueger let him know that fresh eggs were to go to the people doing the fighting, not to those at division headquarters.

While visiting one of my battalions in the rugged mountains just north of Baguio, Krueger asked how recently the men had had a hot meal. The battalion commander told him that the troops had had a hot breakfast and led him across the road and around an embankment to a place where several kitchen ranges were dug in. There, small groups of soldiers, protected from enemy fire, could come to fill marmite cans with hot food to take back to the forward positions. The look of approval on the army commander's face was all the reward any commander needed.

I knew, too, that General Krueger was greatly concerned with conserving what resources we had. After all, we were at the end of a long supply line that had to operate over vast distances.



Lieutenant General Walter Krueger, Commander, Third Army, 1941, with his Chief of Staff, Colonel Dwight D. Eisenhower.



General Joseph W. Stilwell (right) visits General Walter Krueger, 1945.

During another of his visits to my regiment, he was looking around in his usual fashion when suddenly the cannon company started firing in the distance. He asked me what the company was firing at, and I replied that I didn't know. As each successive round was fired, he asked the same question. Finally, I decided it was time for a different reply. I told him I didn't know what the company was shooting at, but if it was firing, it had a suitable target. I also told him I knew the company was not wasting ammunition, because it was too hard to get.

This satisfied him, and he stopped checking each round. But as we continued to visit different elements in the area, he gave me a lesson in resource conservation. He told me how many artillery tubes there were in the Sixth Army; how many rounds would be fired if all the artillery pieces were fired once, five times, or ten times a day; how much tonnage each rate of fire added up to; and how many ships would have to ply the Pacific to get that amount of ammunition to all the different places where Sixth Army troops were fighting. It was a graphic presentation of the tremendous effort needed to keep my cannon company and the supporting artillery firing.

I was happy when the cannon company stopped firing, but I never forgot General Krueger's lesson in conservation. Because of it, more than twenty years later when I arrived in Vietnam and observed the waste of artillery ammunition on unobserved harrassing and interdiction firing, I would not allow it by the units under my command.

## OBJECTIONS

Although Krueger was quiet and unassuming, he was anything but a yes man. He often disagreed with MacArthur, in fact. The first big operation conducted by the

Sixth Army involved attacks on western New Britain, Arawe, and Saidor, starting in December 1943. MacArthur wanted a radar and communications element landed on a small island near Saidor just before the attack was due to get under way. Krueger was averse to attracting the enemy's attention to that area before the Saidor landing took place, and he registered an objection. MacArthur overruled him.

The planned attack on the Admiralties in February 1944 was another time when Krueger protested. The attack was moved up because air reconnaissance reported no signs of enemy activity on Los Negros. MacArthur's headquarters directed an immediate reconnaissance in force on the island. The Sixth Army's Alamo Scouts made a ground reconnaissance the day before the attack and reported that the place was "lousy" with Japanese troops.

General MacArthur had arrived that day in the jump-off area on the cruiser *Phoenix*, and Krueger decided that this meant MacArthur intended to go ashore. Going aboard the cruiser, Krueger went directly to MacArthur's cabin and told him of his concern about the operation. He noted the difference between the intelligence estimates and urged MacArthur not to land.

Of that incident, Krueger later wrote:

*He had expressly forbidden me to accompany our assault landings and yet now proposed to do so himself. I argued that it was unnecessary and unwise to expose himself in this fashion and that it would be a calamity if anything happened to him. He listened to me attentively and thanked me, but added, "I have to go." He had made up his mind on the subject and that was that.*

MacArthur was fortunate, though. Enemy resistance

was light. He walked all about the Momote air strip with a strong enemy force only a few hundred yards away. For some reason, it held off attacking until evening. Had the force attacked in the afternoon instead, MacArthur might well have been killed or captured.

Krueger had another difference of opinion with MacArthur after the landings in Lingayen Gulf. When MacArthur wanted to rush headlong to Manila, Krueger told him that he (Krueger) had only one supply base and was not going to jeopardize his troops by making it possible for the Japanese to sweep out of the hills overlooking the landing area and destroy the base. Several times MacArthur put pressure on him to move on Manila, but Krueger, ever mindful of his responsibility for the safety of his troops, did not budge until he considered it safe to do so.

But never in these disagreements with MacArthur, or with any other senior commander, did Krueger talk about the matter or display his feelings to his staff. After fighting it out with his superior, if he did not win, "that was that." He neither impugned the decision nor implied that there was anything improper about it. Petty bickering was no part of his character.

With respect to his subordinate commanders, Krueger never hesitated to let them know when their tactics or other aspects of their military operations were below par. On several occasions during the Luzon campaign, Krueger was dissatisfied with corps operations and visited the area to get a first-hand look. If he felt that the commander was part of the problem, he took him aside and spoke to him privately, but he never criticized anyone in front of others.

On one such occasion, returning to his jeep after a private consultation with a corps commander, Krueger was obviously unhappy. He said to his aide and his G3, "In over forty years of service I have never raised my voice to an enlisted man, but a corps commander should know better."

He expected officers at all levels to set the standards and to guide their subordinates, and the higher the rank, the more he expected. Frequently Krueger stopped his jeep when soldiers, especially sentries, were performing some duty improperly. He always asked for the senior NCO or whoever was in charge, took him aside and, without raising his voice, explained what the soldiers were doing wrong and why. He was much sterner with his senior officers.

One of the reasons Krueger has never received appropriate attention may be that he was not particularly concerned with public relations. He was never interested in fame or the public eye. With MacArthur as the theater commander, perhaps there was little he could have done in any case. For MacArthur's communiques were, with few expectations, all about MacArthur. As General Robert Eichelberger explained in a letter to his wife, MacArthur wanted to be known not only as a great theater commander but also as "a great front-line fighting leader," which "would be very difficult to put over if any

of his particular leaders were publicized." So MacArthur gave the impression for the people back home that "he has been the one who has been doing the front-line fighting."

Krueger himself never gave any evidence that lack of personal recognition bothered him. But he was irked when his troops did not get credit for their accomplishments. Probably the most notable of these occasions was the invasion of Leyte and the return to the Philippines. All the world knew about MacArthur, but it took some time for word to get out that the Sixth Army under Krueger had made the invasion.

Although some observers have said that MacArthur regarded Krueger as unenterprising and even timid, the opposite is true. MacArthur had a very high regard for him. Once, speaking of Krueger in his grand manner, MacArthur said, "The mantle of Stonewall Jackson rests upon his shoulders." Krueger, in turn, had great admiration for MacArthur and normally referred to him in conferences as the Command-in-Chief.

## REQUEST

Krueger was scheduled to retire at the age of 64 on 31 January 1945, but he was kept on active duty at MacArthur's request. That day turned into a memorable occasion. He met General Griswold, the XIV Corps commander, at Fort Stotsenberg and there participated in the ceremony of raising the American flag again over the installation. He then visited the 1st Cavalry Division's headquarters to go over the final plan for the dash to Manila, scheduled for the next day.

That afternoon he went to San Juan de Guimba, where he had been commissioned a second lieutenant. He recognized the buildings where his company had been billeted, where he had lived as an NCO, and where he had stayed as a company officer. As he was recalling these experiences from his younger days, American prisoners rescued from Cabanatuan by the 6th Ranger Battalion arrived. When the trucks carrying the prisoners came to a stop, the Sixth Army information officer yelled, "Men, this is General Krueger." A great cheer went up from those who had suffered so long. That cheer probably meant more to him than any accolades from the public would have.

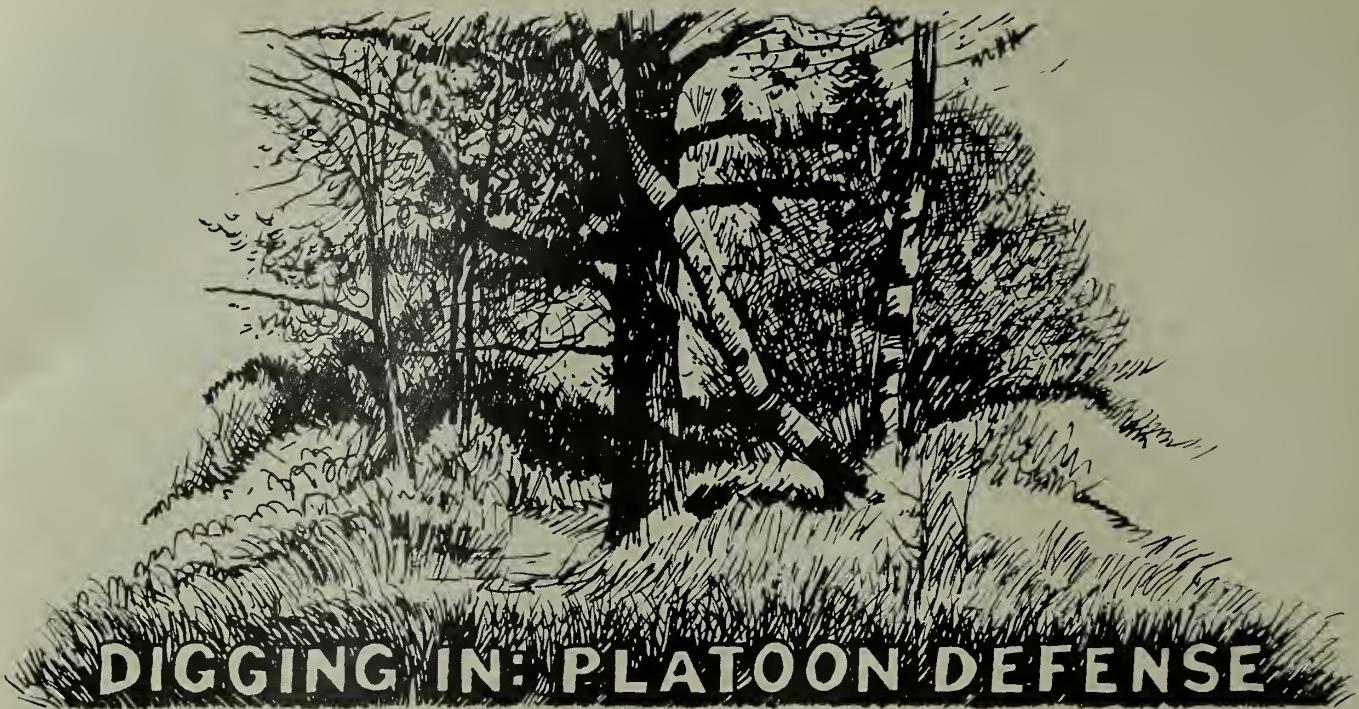
Walter Krueger had a selfless sense of dedication to duty. He was a thoroughly professional soldier who served his country well. He made an enormous contribution to our victory in World War II.

As a matter of fact, the Army could use a good many more Walter Kruegers today. And any time.

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LIEUTENANT GENERAL ARTHUR S. COLLINS, JR., U.S. Army, Retired, graduated from the U.S. Military Academy in 1938. He served throughout World War II with the 130th Infantry, participating in combat operations as a battalion commander in New Guinea and as commander of the regiment on Morotai, on Luzon, and in the occupation of Japan after the war. Later, he commanded the 5th Infantry Division in Germany and the 4th Infantry Division in Vietnam. His last assignment before retiring in 1974 was as Deputy Commander-in-Chief of USAREUR and Seventh Army.

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## DIGGING IN: PLATOON DEFENSE

LIEUTENANT EDWARD J. RUGGERO

Not long ago, the 25th Infantry Division in Hawaii introduced several new training concepts, one of which it called "Model Unit Training." This meant that one unit would be assigned to conduct training that would then serve as a doctrinal model for the other units in the division.

My unit (Company A, 1st Battalion, 21st Infantry) was assigned to create a model platoon in the defense. It would develop a deliberate defensive position, a semi-permanent site that could be used to introduce the leaders of the division's infantry units to the complexities involved in conducting a deliberate defense. In the next few weeks and months we were to learn a great deal about these complexities. In short, it proved to be an enormous task.

My unit was chosen because it had had some experience in the platoon defense while at Fort Lewis, Washington, where it had gone to participate in an exercise with the 9th Infantry Division. While this experience hardly qualified us as experts, we *had* learned two things from shivering through a 24-hour exercise: The deliberate defense, even at the company and platoon level, places a great demand on a unit's logistical support system (especially in light infantry units), and, second, because of the amount of strenuous work that has to be done in a limited time, the unit must strictly adhere to a definitive priority schedule of work.

The company's first job, therefore, was to find an appropriate location, a model position that would be generally applicable to all terrain, not just to the gulches

and the thick vegetation that are characteristic of the island of Oahu. Eventually, we found such a location: 300 meters of gently sloping, relatively even ground stretching from a woodline in the north to a deep ravine in the south. Using Field Manual 7-8, the unit went about planning and preparing its platoon deliberate defense in much the same way any platoon would.

In planning any defensive location, a company commander's guidance to a platoon leader first defines the platoon's sector by pointing out specific coordination points on the ground and assigning the general orientation of the platoon's crew-served weapons. The platoon leader's reconnaissance is most important, because his selection of positions determines the effectiveness of the platoon's fires and thus its survivability. In his reconnaissance, then, he must consider the following points:

**Observation.** The platoon leader and his squad leaders need to get down on the ground to see what their men would be able to see from their various positions. This is especially important for the platoon leader in positioning his crew-served weapons. It is also a continuing process; the leaders must get into each fighting position and observe its sector of fire as the riflemen would in a firefight.

**Cover and concealment.** The best place from which to inspect cover, concealment, and camouflage is from the enemy's viewpoint. The squad leaders should lie on the ground a hundred meters from their positions to see if they can hit the occupants with grenades or rifle fire, and should have their soldiers do the same.

The platoon leader should not limit himself to considering the close-in attack. If there is a concealed position 1,100 meters away, for instance, from which an attacker could place tank rounds into the platoon's defensive positions, the leader should know about it. In combat, reconnaissance that far forward of friendly lines may not always be practical, but if it can be done, the platoon will be better prepared.

**Obstacles.** Natural obstacles are very important, but they are not always obvious. Man-made obstacles such as wire, minefields, and automatic ambushes must be carefully integrated with the natural obstacles into the platoon's fire plan.

**Key terrain.** Looking at things from the attacker's viewpoint gives the platoon leader an idea of the terrain the enemy will want to control, the same terrain that he must be denied.

**Avenues of approach.** The platoon leader must be concerned with all possible approaches, because a determined enemy that is denied easy access will find another route, no matter how difficult. The leader's job is to focus on the most likely avenue of approach to his position and to prepare for the unexpected.

In this process of finding and preparing a platoon defense, the rifle squad leader also has a number of decisions to make. Once assigned a sector, he must place his soldiers so that their fires will supplement the fires of the platoon's crew-served weapons. He should position his

automatic riflemen so that they can fire into the sectors that are not covered by the machineguns. Because grazing fire is just as important for the automatic riflemen, they, like the machinegun crews, must walk their entire sectors to determine any dead space. The squad leaders must also have their grenadiers pace the distance to targets within their sectors of fire. When each squad sketch reflects the careful integration of weapons and interlocking fires, the platoon leader is better able to see that his front is secure. He must also know the sectors of fire and the types of weapons in the adjacent positions.

After taking all of these principles into consideration, our unit began constructing our model positions, following the guidelines in FM 7-8. Two of the soldiers were allowed to make one modification: they constructed overhead cover in the center of their position as well as on either side. This gave them excellent cover from indirect fire without severely limiting their observation of their sector.

One of the tests the squad leaders conducted as the troops were finishing their positions was to toss training grenades in each one while the men manned their weapons. As a result, several of the positions constructed in the crescent shape proved too large for just one grenade sump, and their occupants decided to build additional sumps.

Individual marksmanship was a major consideration in tailoring the positions to their occupants. Limited visibili-



ty firing devices, although a great help at night, only got in the soldiers' way as they attempted to engage targets in the daytime. For this reason, the platoon decided to use only short aiming stakes that marked a direction of fire but did not support the weapon or interfere with daylight firing. As a further improvement, sandbags were placed in front of the position to give the riflemen a stable firing platform. Finally, the friendly sides of the aiming stakes were marked with luminous tape to help the riflemen identify them at night.

After individual positions had been prepared, alternate positions were assigned for the entire platoon. Supplementary positions were also designated by the platoon leader, with sectors of fire that could cover the platoon's flanks or rear in the event an adjacent unit was overrun. One-man positions were prepared, since they would most likely be occupied at the same time the primary positions were being manned. The work on these positions included only locating the positions, constructing and camouflaging the frontal berms, and placing the sector stakes.

## OBSTACLES

Elaborate wire obstacles were constructed forward of the defensive position. Closest to the trace was the protective wire, a triple-strand concertina barrier that extended around the entire position. Gaps in this wire were made by overlapping the segments so that anyone entering the gap would have to move parallel to the platoon's front for 20 meters or more, thus exposing himself to the platoon's fire. It was found that painting the concertina with subdued paint at least made its exact lay difficult to determine when observed from the front.

Tactical wire was run parallel to the machineguns' final protective lines from the protective wire to the point at which the lines intersected. This barrier was made of two sets of triple-strand concertina on one side and two sets of double-apron wire on the other. Supplementary wire, tied in with the tactical wire and extending in great arcs toward the enemy, was intended to channel approaching infantry toward the machinegun FPLs. Hasty protective minefields were mixed in with the wire.

The gulch that surrounded the defensive position was marked with only one or two trails through what was otherwise almost impassable underbrush. These trails were covered by automatic ambushes in which a PRC-77 battery would be used to detonate a "daisy chain" of claymore mines. These booby-traps, since they could not be observed from the trace, were rigged with anti-handling devices. Trip flares and simple noise-making devices, especially in the wire, completed the obstacle plan.

An observation post (OP) was located well forward of the platoon trace and astride the main infantry avenue of approach, a ravine that led to the platoon's right flank. The men occupying the OP had to dig that position as

well as their own positions on the platoon trace. (These soldiers were rotated frequently.)

In addition to their individual weapons, the team manning the OP was equipped with a map and a compass (for adjusting indirect fire), night vision devices, and wire communication directly to the platoon leader's position. Their withdrawal route through the minefield was marked with engineer tape staked down at both ends. Once they started to withdraw, they would remove the first stake from the ground but leave it in place. Then when they reached the other end of the minefield, they would simply grab the tape and pull it out of the minefield as they moved so that the safe lane would not be marked for any pursuers.

The platoon was now ready to begin the equally important phase of rehearsal and contingency planning. The first priority was fire control. Machinegun crews were carefully instructed to fire only on command from the squad leader who controlled that sector. In this way, the platoon leader could make sure his machineguns would not reveal their positions to an enemy reconnaissance by fire. A concentration of fires could be accomplished by voice commands and by the use of target reference points that were known to all platoon members, or through the use of tracers by squad and team leaders. As they always should, the subordinate leaders kept on hand several magazines loaded only with tracer rounds for use in designating targets.

For communications, the squad and platoon leaders were instructed to keep their phones to their ears so they would not miss anything in the noise and excitement. In addition each squad had a standard format for reporting its overall status after each engagement. Each squad leader established a reporting pattern and taught it to his men so they could quickly and concisely report their ammunition status (including hand grenades, LAWs, and claymores) as well as any casualties.

As an additional communication device, communication wire was rigged for use as tug cords between the squad leader's position and those of his squad members. This device proved especially helpful at night, when a tug on the cord could be used to assure each party that the other was awake.

## RESUPPLY

The platoon's members found that one of the trickiest aspects of making the defense work was resupply, in and out of action.

The starting point for stockpiling ammunition was the basic load for each weapon with every man maintaining a basic load of ammunition in his position. The squad leaders kept an additional basic load for their squads in or near their positions. Finally, the platoon sergeant maintained a basic load for each platoon member in a position separate from but near his own.

Extra rations and water were handled in a similar way:

The platoon sergeant issued two meals to each man, with instructions to eat the meals 12 hours apart unless they were told otherwise. The squad leaders kept two meals per man and five gallons of water at their storage positions; the platoon sergeant did the same.

Too, the platoon leader designated a rest area in a covered and concealed location behind the trace where the platoon's members could go to get a hot meal or to relax and stretch their muscles.

Evacuation plans were rehearsed so that the withdrawal to alternate or supplementary positions would be orderly and well controlled. The plan was for one man from each position to move to and occupy his alternate or supplementary position on signal. The men were given a chance to rehearse moving in both daylight and darkness under simulated enemy fire. This way, if the platoon had to defend its flank from its supplementary positions, the platoon leader could get fire to that sector quickly. The crew-served weapons also had alternate and supplementary firing positions.

The evacuation of wounded soldiers was a contingency that also had to be considered. The leaders asked themselves such questions as Who helps the casualty from his position when the platoon is under attack? and How serious a wound will require that a soldier be moved, even under fire?

Every platoon member had to know the location of the platoon medic and the casualty evacuation point. Each of the team leaders prepared field expedient litters from ponchos and long branches or trees. These litters were placed behind the team leader's positions and then camouflaged.

## SECURITY

Security, which had been foremost in the platoon leader's considerations from the beginning, also had to be considered at this point, including security patrols and surveillance. Patrolling forward of a friendly defensive area is always a risky operation that requires thorough planning, careful coordination, and near-flawless execution. Not only must patrol leaders be competent, the unit leader through whose position a patrol must pass either going out or coming in must have excellent control of his men.

Plans had to be made, too, for the supervision of the soldiers who would pull security from their individual positions, especially at night. In addition to tug cords attached to the wrists of each sentry, all the soldiers who were assigned a security mission during the hours of darkness were provided with night vision devices mounted on their weapons, as far as this was possible. The OP had first priority for the available devices, with the squad leaders next.

(On a real battlefield, the debris generated by a unit can also be used to construct passive security devices. Fuel drums and ammunition packing cases can be filled

with "foogas," primed with detonating cord, and placed at various points in the wire obstacles. Plastic explosives and thermite grenades, rigged as automatic or command-controlled devices, can also be used for this purpose.)

When the platoon had completed its training on the model site, briefings were held at the site for all the division's infantry officers, from company commanders on up. The battalion and company commanders of the unit that built the site and conducted the training discussed their respective roles in the process. Then the platoon leader briefed the group while walking the platoon trace and pointing out the significant features of the defensive area. Certain aspects of the fire and barrier plan had been marked to make them readily identifiable. For example, colored wooden panels and engineer tape identified the squad sectors of fire, the indirect fire targets, and the final protective fires.

The company's leaders also discussed their logistical requirements and made some important points about the inadequacies in the basic load design for the battalion. For example, 300 rolls of concertina wire had been stretched among more than a thousand engineer pickets. A thousand sandbags and more than 500 feet of heavy planking had gone into the individual fighting positions. These amounts come close to being an entire battalion's allowance for barrier material.

A lot of manpower had also been required — about 1,900 manhours. This equates to a full-strength infantry platoon working on its positions full-time for the first 24 hours of occupation and 12 hours a day thereafter for about ten days.

The response from the division's leaders was encouraging. Except for some of the Vietnam veterans, few of the officers had ever seen such a complete defensive position. The company had simply applied current Army doctrine and carried it out on the ground to an extent not usually seen in training.

The attention to detail and the enormity of the effort involved in the preparation of the site has done much to promote even more imaginative thinking and planning within the division. Several units have used the site for training their junior leaders and soldiers, and as more people are exposed to it, more and better ideas continue to come forward.

Field Marshal Erwin Rommel once observed after a battle that "the biggest mistake the enemy made was in not looking at his defensive positions as the attacker would." That is the principle the platoon applied. After the site was completed, its members, looking at their handiwork from the enemy's vantage point 500 meters away, had a hard time picking out their own positions. As a result, they were all confident in their ability to hold that defensive position.

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LIEUTENANT EDWARD J. RUGGERO graduated from the U.S. Military Academy in 1980, after which he completed the Airborne and Ranger courses. Since then, he has served with the 1st Battalion, 21st Infantry "Gimlets," first as a rifle platoon leader, then as a support platoon leader, and now as executive officer of Company A.

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# *pragmatic* **POL**



Any mechanized infantry battalion that has to maneuver over a large area for any length of time is going to have problems with its Class III resupply. Getting the right items in the right quantities to the right places at the right times is a challenge.

A mechanized infantry battalion task force in Europe, for instance, usually consists of a headquarters company, a combat support company, two mechanized infantry companies, and an attached tank company organized into company teams. The battalion's third infantry company is usually cross-attached to the tank company's parent unit.

When the attachments become effective, the infantry

company that leaves takes with it a mess team and one of the support platoon's four five-ton POL trucks. The attached tank company brings along its own mess team and a GOER vehicle. This gives the task force three five-ton POL vehicles with trailers and one GOER with trailer to support its five companies. (Figure 1 shows the battalion's usual MTOE configuration.)

Fortunately, in Europe the cross-attached infantry company is seldom in the field at the same time as its parent battalion, which means that the battalion still has the use of the POL tanker that normally supports that company. With this vehicle, every company in the task force can be refueled at the same time, and the task force

can move as a cohesive unit after a single refueling operation.

Although this is a fairly good system, there are two major problems with it. First, when the entire battalion does have to go to the field, such as for a REFORGER exercise or for a brigade FTX, the task force loses one POL tanker. In these exercises, then, the task force is always one POL vehicle short when it stops to refuel. One of the POL vehicles, therefore, must pull double duty, which means that it takes longer to refuel all of the vehicles.

The second problem is that the means of distributing oil and other packaged products, which are just as important as bulk fuel, are limited. Unlike the GOER vehicle, for example, the POL trucks have no built-in place where 55-gallon drums of oil can be secured. At best, only five-gallon cans of oil can be placed around the pods. Drums of oil, in addition to the mogas pods, cannot be placed on the trailers because of cross-country weight limitations.

Facing these problems, a mechanized infantry battalion I served with in Germany looked for a way to solve them. This is the solution it arrived at, one that assured that each of its companies would have an adequate stock of POL supplies to withstand the strain of battle.

The first step in the battalion's search involved analyzing its specific fuel requirements. Although fuel consumption could have been estimated in various ways, the battalion based its requirements on the actual amount of fuel its vehicles consumed on a road march between Grafenwoehr and Hohenfels, and during a subsequent task force ARTEP at the latter place. The final figure included data for all attached units, for support vehicles, for generators, and for messing operations. The battalion also determined the daily rate of consumption for each type of fuel and how much each subordinate unit used.

The battalion's package products presented a somewhat different problem, one that did not concern itself directly with how much or how little was used. It was the difficulty the battalion had in handling the products that caused the problem.

The high usage items, for example — OE-10, OE-30, and antifreeze — were stored in 55-gallon drums. Since each drum weighed 470 pounds, a unit's basic load was not easy to lift onto a five-ton truck. Another problem was that there was not enough space on a five-ton POL truck to haul even one 55-gallon drum, much less three, in such a manner that they could be accessible and easily replaced when empty. And because of the cross-country weight limitation on the one-and-one-half-ton trailers, the battalion was forced to commit a five-ton cargo truck to haul the basic load of packaged products.

The problem was obvious. With the battalion's entire stock of package products on one truck, the system was not totally responsive to more than one package product request at a time. Giving the basic load of package products to the units to haul themselves was an alternative, but their ability to carry drums was extremely limited. Converting the 55-gallon drums to depot pack five-gallon cans did not totally solve the problem.

We knew that the ideal solution for distributing the bulk fuel would be to have a pump unit for each POL vehicle, but this was not always possible. And the ones that were available sometimes failed. But since all POL vehicles could be converted to gravity flow, even a disabled pump did not completely deadline a tanker, because it could still carry fuel. An executive officer or first sergeant can usually find a location for refueling that places the POL tanker much higher than the vehicle to be refueled. Besides, a considerable number of vehicles could be refueled from a gravity flow tanker even if the latter were sitting on level ground. We decided that it was not mandatory, then, to have pumps on all refueling vehicles — only convenient.

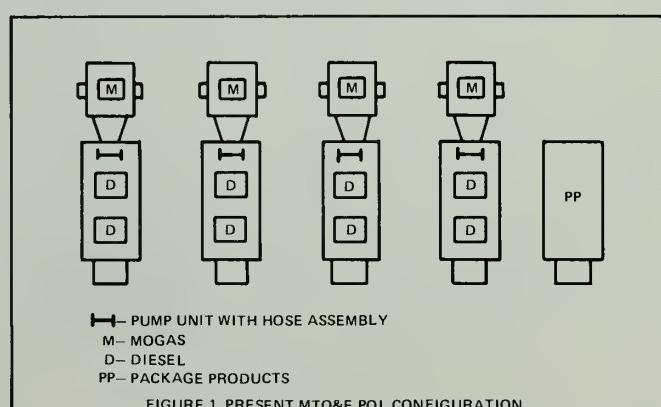
Something else we had to consider was just who needed which type of support. We found that diesel consumption was usually spread through the task force rather evenly while mogas consumption was not. In fact, it was the headquarters elements that generated the highest demand for mogas.

## IDEA

In examining the entire problem of POL resupply, we observed the company level POL operations of some of our Allies in USAREUR. We particularly liked the method used by the 4th Canadian Mechanized Brigade Group (4th CMBG) during one exercise.

The Group's tactical refueling vehicle, which is our M548 (the vehicle that is now used to haul ammunition for the 155mm howitzer), was filled with about 300 five-gallon cans. Some of the cans contained mogas and oil, but most of them contained diesel fuel. Because the vehicle was tracked, it could go wherever the maneuver element could go. When it pulled into a refueling area, one man issued cans of gas to each vehicle. The crews then refueled their vehicles and returned the empty cans. (Spouts were part of the basic issue items for each vehicle.) Many of the maneuver vehicles also carried extra five-gallon cans of fuel, and when these were empty they were just traded for full ones.

Because there was no pump and hose unit, there was no need to position the refueling vehicles within reach of a



fuel hose. The distance between the two vehicles could be as far as the crewmen could carry the cans. The Canadians simply substituted manpower for machine power. In addition, this seemingly crude system was quieter, it could be used to refuel several vehicles at the same time, and it imposed fewer restrictions on the positioning of the vehicles.

After we watched this operation, it became obvious to us that if we placed some five-gallon cans on each of our POL tankers we could conduct this same type of operation when no pump unit was available or when a pump unit was down. We also believed this method would give us flexibility for the times when the terrain would not allow a POL tanker's hoses to reach a vehicle, such as when the M577s were set up in the TOC.

## RECONFIGURATION

With these considerations in mind, we decided to reconfigure our equipment. We based our decision on several assumptions: That the task force required less mogas than it organically carried; that the companies with three or four jeeps could refuel them each time they were resupplied with diesel; that a gravity flow tanker with five-gallon cans would be practical to use with the

headquarters elements; and that five-gallon cans and flexible spouts would be readily available from the supply system. In addition, we made a thorough examination of our Class V assets compared with our controlled supply rate and found that we could take from those assets three one-and-one-half-ton trailers to use as POL carriers.

Accordingly, we took the mogas pods off two of the one-and-one-half-ton trailers, converted them to diesel, and placed them on the five-ton cargo truck that was normally assigned to haul the package products. Although no pump unit was available, this one move increased the battalion's ability to haul diesel by 25 percent and provided the headquarters company with a gravity flow tanker.

We then built oil barrel racks on the five trailers. Figure 2 shows how we configured those trailers to take both package products and five-gallon cans of mogas. We found we could easily fit 20 five-gallon cans on a trailer, although initially we put on only 10.

There were several notable features to this system:

- No modification of the trailers was necessary other than to drill four holes to bolt the rack in place.
- The 55-gallon drum and its tap were high enough so that a standard five-gallon can could be positioned and filled.
- The rack was low enough in the trailer for the full drum to be placed into position by tipping and sliding it. Once the drum was in the trailer, it could be used without its full weight having to be lifted.
- There was enough space in the front of the trailer to store extra drums of oil, and enough space under the rack to store all of the remaining package products, including 35-pound pails of grease. The back was wide enough to accommodate 20 five-gallon cans of mogas.
- The combined weight of all of the items was less than that of a pod and 600 gallons of mogas.

We also found that the package products trailer that belonged to the headquarters did not need to carry mogas cans, because the headquarters elements had two other trailers, each with a 600-gallon mogas pod. Its gravity flow truck also carried small amounts of package products.

Under this revised system, one trailer with a POL tanker holding 1,200 gallons of diesel fuel went to each company (see Figure 3). The headquarters company's package products trailer, which was towed by a five-ton cargo vehicle, was kept in the field trains. From this trailer the headquarters tanker could replenish its supply of package products. This trailer also supported all of the vehicles in the field trains.

The two one-and-one-half-ton trailers with mogas pods supported the headquarters elements, where there was the highest demand for mogas. One mogas pod was placed in the field trains and was towed by one of the support platoon's cargo vehicles. Here the mogas pod supported the demands of the field trains vehicles, the mess trailers, and all the headquarters company mogas cans except those belonging to the headquarters element.

The other mogas pod, which was towed by the head-

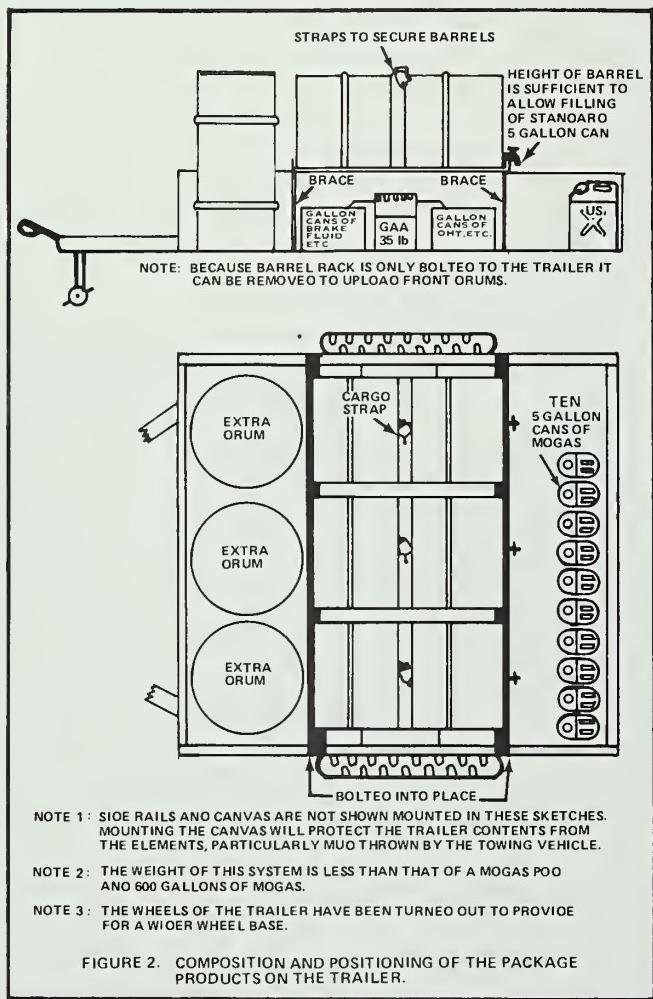


FIGURE 2. COMPOSITION AND POSITIONING OF THE PACKAGE PRODUCTS ON THE TRAILER.

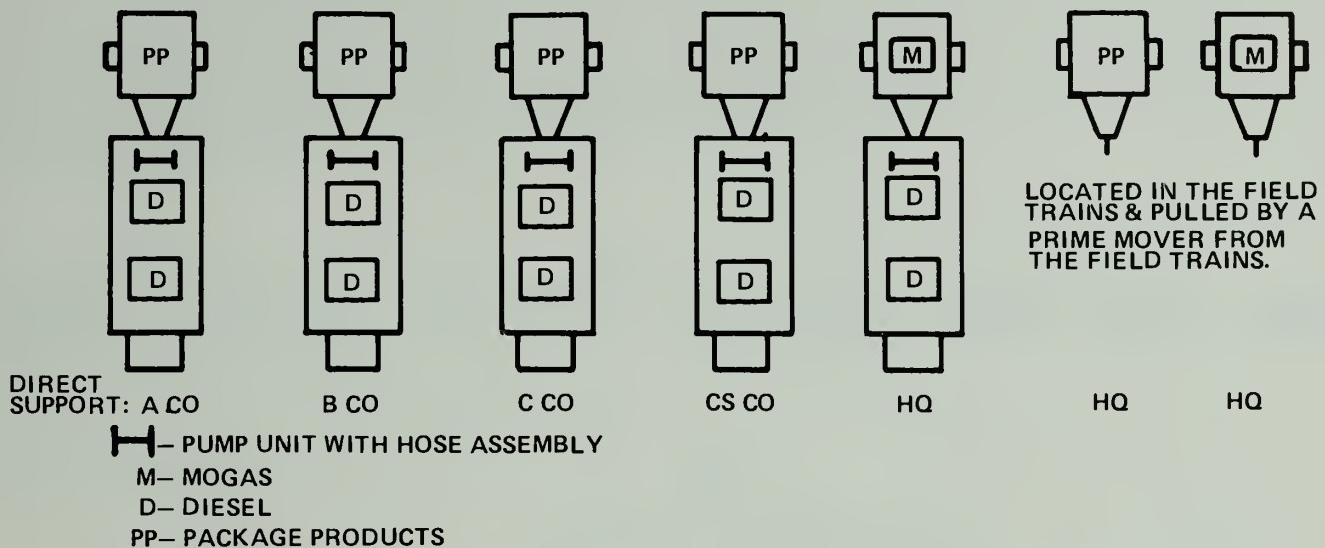


FIGURE 3. THE NEW CONCEPT OF POL SUPPORT

quarters' gravity flow tanker, provided diesel fuel for the field trains and both mogas and diesel fuel for the combat trains and the TOC.

#### FEW PROBLEMS

The battalion found few problems with this new system. Even when a gravity flow tanker could not be positioned to facilitate direct hose-to-vehicle transfer for such vehicles as the M577s, refueling presented no major problems or delays once everyone understood the system of using the five-gallon cans. Since the headquarters company now had its own tanker, time was not always as critical to its refueling operations as it had been in the past.

Refueling the two-and-one-half-ton and five-ton trucks and the tanks directly from the gravity flow tanker was slower without pump units, but a slow tanker was always better than none at all.

The package products trailers also worked well. Most companies had enough mogas with 10 five-gallon cans. The only real improvement needed was to raise the canvas on the package products trailer to keep mud and slush off the contents.

Placing the package products trailer and one of the mogas pod trailers in the field trains presented no problems. We tested this concept during an ARTEP. At the same time, we also tested our Class V resupply procedures. When we had to move either the mogas or the package products trailer, or had to move both of them, Class V vehicles were usually available in the field or combat trains to pull them.

The one question that has been neglected so far is how does the mess trailer get enough fuel when it is no longer consolidated at the field trains? There are three possible

answers aside from sending a 600-gallon pod with the mess.

The first is to mount fuel cans on the fenders of the water buffalos, usually three on a side; the second is to increase the number of fuel cans that the package products trailer carries. A third solution is to have the mess sergeant refuel the mess trailer's organic fuel cans at the field trains when he stops there on his way to the forward area support team's location. Any of these methods will work.

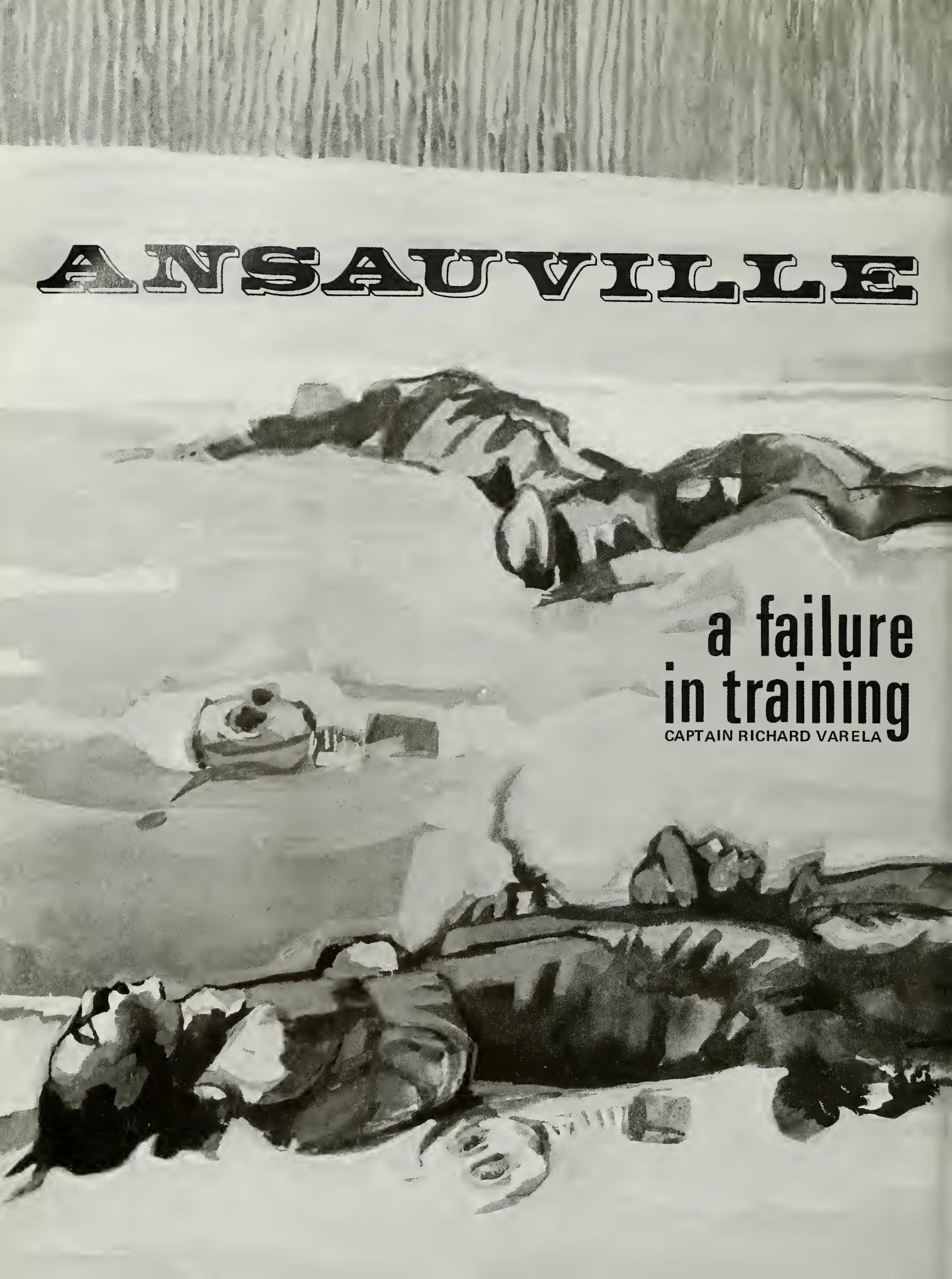
We found the biggest obstacle to timely Class III resupply was the company that failed to return its empty POL tanker promptly to be refilled. But when everyone thoroughly understood and conscientiously implemented the concept, distribution was easier. In addition, the system was more flexible, not only because there was a 25 percent increase in the capacity to carry diesel fuel but also because the distance between the refueling vehicles was no longer restricted by the length of the hoses on the POL vehicles or by the lack of pump units.

Given these improvements, each company commander could plan his POL resupply to support his scheme of maneuver, and the entire mechanized infantry task force was better prepared to stand the strain of battle.



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# ANSAVILLE

A black and white photograph of a rugged, rocky coastline. In the foreground, a small, single-person boat with a motor is visible in the water. The background features large, craggy rocks and a sky filled with dramatic, textured clouds.

a failure  
in training

CAPTAIN RICHARD VARELA

**W**hen the United States entered World War I in early 1917, it was a classic example of a country going to war from a standing start. The entire operation of mustering, training, transporting, and supplying the forces sent to Europe had to be thrown together in a short time. This massive undertaking was further complicated by the very nature of the weapons that were being used in Europe and by the fact that the United States had neglected to keep pace in its military technology and tactics with those weapons. This deficiency would be particularly felt in the weapons and techniques of chemical warfare, and in the training given to the soldiers.

Several years before, the Germans had demonstrated that a deadly poison gas could be mass-produced, and at Ypres on 22 April 1915 they had proved that the gas could be delivered on target. Something else had also been proved in that battle — that soldiers who were not adequately trained to face a chemical attack tended to panic and run. Unfortunately, in the two years following that battle the U.S. had done nothing to prepare its troops for the day when they, too, might face chemical weapons. That day came early in 1918.

The first American unit to experience a full-scale gas attack as an independent command was the 1st Division. This unit was made up of the 16th, 18th, 26th, and 28th Infantry Regiments, under the command of General Robert Lee Bullard. The division had been chosen by General John J. Pershing to be the first to occupy an independent front-line sector. It was assigned the Ansauville sector, 25 miles northwest of the city of Toul.

General Bullard had put his units through a vigorous training program, including the most thorough gas training of any division in Europe. But even though these soldiers had become adept at the concepts of trench warfare, gas continued to baffle them. To make matters worse, when they finally went into the front lines each of the soldiers carried either a British or a French gas mask, or one of each.

The plan was for the Ansauville sector to be occupied by rotating battalions of each Infantry regiment and by rotating batteries of the 5th, 6th, and 7th Field Artillery Regiments. The division conducted a relief in place of the 1st Moroccan Division, using elements of the 16th and 18th Infantry Regiments, during a rainy night in January 1918.

Just before the relief operation, the Moroccans had conducted a raid on the German lines and had inflicted considerable losses upon their opponents. The Germans had retaliated with a mustard gas attack that had produced about 200 casualties. In fact, elements of the 1st Division had passed these casualties while they were moving forward.

Although the American soldiers were moving into an obviously contaminated area, and despite the fact that they had been briefed about the situation, they showed no signs of being prepared for gas warfare. The conditions on the line, for example, produced a few casualties almost immediately when some soldiers set up in a con-

taminated gun position and when another washed his hands in a shell hole filled with mustard-contaminated water.

The first order of business for the Americans was to reconstruct the front-line trenches. Many of the positions were in low ground in a marshy area, and the troops soon found themselves knee deep in mud. They reorganized the entire sector in depth, established trenches and strongpoints, and laid new communication lines behind the front lines.

## ACTIVE FRONT

The quiet stalemate was soon disrupted by General Bullard's orders not to wait for the Germans to fire first. He sent up word for the soldiers to "be active all over no-man's land." He said, "Do not leave its control to the enemy." He encouraged ambushes and raids, for he wanted the 1st Division to be aggressive and to harass the Germans constantly. The French were only too glad to help by allocating to the U.S. artillery batteries the better part of 100 gas shells a day. And the men of the untried American division were only too willing to use those shells.

What developed next was an escalating artillery duel across no-man's land. The U.S. artillery units immediately began firing French No. 4 gas shells (cyanogen chloride) and No. 5 shells (phosgene). The Germans responded in kind and increased the number of shells they fired from 100 to 800 daily. In spite of the heavier rates of firing, the 1st Division suffered relatively few casualties during January and early February, because most of the German shells missed the U.S. positions by a comfortable margin. But things changed in the early hours of 26 February when the Germans delivered a sudden and heavy gas attack on the 18th Infantry.

The attack apparently brought great confusion, with shells bursting throughout the sector. On the American side, panic seized some of the men of the 3rd Battalion, 18th Infantry. The first salvo of gas shells struck so suddenly that many of the men inhaled the gas before they could adjust their masks. One man stampeded and knocked down two others who were adjusting their masks. Another threw himself in the bottom of the trench, screaming and pulling the masks off two soldiers who were trying to help him. Still other soldiers found their French masks inoperable, perhaps because they had become wet, and were gassed while switching to their British masks. An officer was gassed while shouting at some soldiers who had removed their masks too early.

The casualty count mounted throughout the day. The following is General Bullard's explanation to his corps commander:

*It appears that certain noncommissioned officers permitted men under their command to remove their masks within a half hour after the last gas shells fell. It also appears that after daylight some men were permitted to*



*work in the vicinity of the shelled area without wearing gas masks, and men who had inhaled small quantities of gas were not required to rest quietly. These failures to carry out existing orders on the subject have resulted in increasing the casualties of this gas attack about 50%.*

This breakdown in gas discipline was also noted by the battalion commander, who said that "rice for breakfast that morning was allowed to stand exposed for several hours in the trench before being eaten" and that this produced "a large number of gas cases that developed some time after the attack."

According to some reports, the attack was to have been followed by a German raid on the sector, but the raid was called off when half the Germans' shells landed in their own trenches, forcing their soldiers to withdraw for two days. The Americans also withdrew from their trenches after the attack, leaving only small groups to observe and to reoccupy the front lines at daylight each day.

## RAID

The artillery duel resumed and continued throughout February producing casualties on both sides. Then on 1 March, the 18th Infantry received another barrage followed by a raid. The raid demolished trenches,

parapets, shelters, and emplacements. One platoon that had just returned to its front-line position was caught by a German box-barrage. The G3 casualty report showed 24 killed, 30 wounded, and 2 gassed.

The Americans decided that a retaliatory raid was in order and planned one for 4 March. The supporting artillery batteries fired between 5,000 and 6,000 shells in preparation for the raid. About half of these shells were No. 4 and No. 5 gas shells. Two raiding parties were ready, one from the 18th Infantry and the other from the 16th. But the raid was called off by the infantry when they found that the sections of Bangalore torpedoes scheduled to be used by the engineers were too long to pass through the turns in the trenches. This meant that they could not be placed in position for the raid.

But the Americans were not about to give up on their revenge raid entirely. On 9 March the regiments turned over, with the 26th Infantry replacing the 16th and the 28th replacing the 18th. But the original raiding parties stayed on, and finally on 11 March, after an artillery preparation, the division mounted two raids, one in the early morning and the other in the evening. Both raids, unfortunately, had the same results: They went as far as the third defensive trench line without encountering any German troops. Warned by the preparation fires, those troops had been withdrawn.

The artillery duels continued to increase in both tempo and quantity, and the batteries suffered heavy casualties. Their gas discipline was not any better than that of the infantry. For example, medical aid men sometimes made gassed men walk from the aid posts to the ambulances, thus creating more serious casualties. One battery suffered 21 "eye cases" when the men, in the absence of their officers, removed their masks.

Finally, when the dreaded German offensive began on 21 March, General Pershing offered French Marshal Henri Philippe Petain "all the American forces for such dispositions as were deemed most advantageous to the cause." As a result, the 1st Division was relieved by the 26th Division and moved to Picardy, where another battle was raging. The relief was complete by 4 April 1918.

## CASUALTIES

It is impossible to tell exactly how many gas casualties there were in the Ansaувille battle because of wide discrepancies in the figures from the various sources. For example, the division's gas organization records showed 127 officers and men gassed, while the Division Surgeon's records showed 523. In any case, General Bullard seems to have come under considerable criticism for his gas casualties. He noted in a memorandum to his field commanders that "American losses are from two to four times as great as those of the French." He also said, "There is but one conclusion; it is that our men, either from ignorance or carelessness, are not taking cover." He went on to say that "Knowledge and real efficient training came only after hard experience and after the hysteria of gas officers had ceased."

Several other facts concerning gas casualties were brought out in a report sent to the Chief Surgeon of the American Expeditionary Forces from the Medical Gas Warfare Board (A.E.F.). A field hospital commander noticed that out of 261 cases admitted for gas poison after a particular incident, only 90 had any symptoms. The remainder were returned to duty. A number of similar incidents were reported, leading to certain conclusions: Some of those listed as gas casualties apparently only thought they had been gassed and were actually suffering from something that could be called gas mania. Others, smelling the explosions of ordinary shells, became panic-stricken in the belief that they were being gassed. Perhaps as few as one-third of the cases reported as gas casualties actually were.

It is quite possible that the 1st Division at Ansaувille had some of these same problems. It is certain that it continued to have gas discipline problems. As late as June the division's gas officer stated that "in the satchel of salvaged masks are found everything from clothing to wrist watches."

In spite of these problems, the 1st Division was deployed to the Cantigny campaign, in which they distinguished themselves in the offensive use of gas and

proved General Pershing's tactics of open warfare. It was a psychological turning point in the acceptance of the Americans as part of the military effort.

These soldiers had entered the war in a state of total unpreparedness, especially in their ability to conduct chemical warfare. They had had to conduct their last-minute training on the battlefield, the worst possible place to conduct it.

## CHANGING TIMES

Although the times have changed in terms of technological preparedness, our approach to training today is still much the same. The program of six hours to two days that was judged adequate before the men of the 1st Division marched off to a contaminated area has been lengthened, of course. But the nature of the threat has also changed. The method of delivering the chemicals is no longer a less-than-accurate projector, but an entire array of accurate weapon systems. The chemicals themselves have changed, too. They are no longer the primitive chlorine and mustard gasses; they are the invisible nerve-gasses and perhaps other more deadly chemicals whose existence is so far only rumored.

Considering this increase in the threat, then, it is questionable whether we have done enough to increase the quality and quantity of our training. In terms of discipline, instead of the clothing and watches encountered in the mask satchels at Ansaувille, today we would probably find comic books, soda cans, and candy bars.

It may be only human nature to panic upon suddenly encountering the unknown, but that is the purpose of training — to drill enough confidence into a soldier to carry him through those moments until he is rational again.

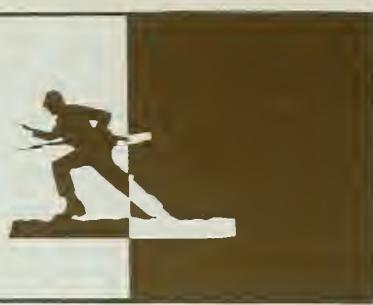
At Ansaувille, it was the failures in training and discipline that gave the enemy the advantage. Given the nature of the chemical threat that we are facing, we must, at the very least, deny an enemy that advantage by constantly drilling and testing our soldiers and by insisting on the strictest NBC discipline in all their training.

We must never again enter a war from a standing start as if we were coming from another century, especially in terms of chemical warfare. Whatever sector we find ourselves occupying in the future, it may not be anything like Ansaувille. But we can be certain that there will not be time for us to conduct our last-minute training on the battlefield.

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# TRAINING NOTES



## Doctrinal Manuals

CAPTAIN TERRENCE N. THOMAS

One of the major tasks of the Infantry School is to develop infantry doctrine and to disseminate it through various manuals. This is a continuing process, one that is designed to include input from the people in the field as much as possible.

To keep the field up to date on doctrine, each manual is reviewed at least every three years. The review includes looking at the content of the current manual and then considering comments from the field about the manual. It also takes into account any new equipment that has been developed since the manual was produced. A decision is then made on whether to continue to use the current manual, to update it, or to write a completely new one.

If the decision is to produce a new manual or to update a current one, the School forms a writing team that consists of a doctrine writer (who is in charge of the team), appropriate tactics instructors, a professional editor, and an illustrator. The members of the team work closely throughout the process of developing and producing the manual.

During the first phase of the process, the subject of the manual is

researched, and pertinent information is collected. Then a detailed outline is prepared and coordinated to make sure all of the important points will be covered. Finally, a preliminary draft is prepared.

The preliminary draft focuses on content; it presents ideas, concepts, principles, procedures, and doctrine in a logical sequence. (Usually there are no illustrations in this draft.) It is sent to the School's departments and directorates for their review and comments. This review is an important part of the process, because it helps to verify that the purpose and scope of the manual are adequate. The comments are incorporated into a coordinating draft, which usually includes illustrations.

This draft is sent to the field for review, so that any comments field commanders may have can be considered before a final draft is prepared. Because the coordinating draft is the most important step in developing a good manual, the School depends on these field reviews to make sure the manual will serve the purpose for which it is intended.

The comments from the field are incorporated into the final draft, which roughly resembles the final

product in format and content, including the location and description of the illustrations.

Occasionally, a manual in final draft form is distributed to the field on a limited basis. Although it is not exactly like the final printed product will be, it can be used for reference and training purposes until the final product can be printed and distributed. Meanwhile, several more production processes must be completed: The pencil dummy, the comprehensive dummy, the camera-ready mechanical, and the final printing and distribution.

The purpose of the pencil dummy is to design the publication for size, page content, and positioning of illustrations. The comprehensive dummy is prepared to resemble the final printed product in size, organization, and page layout. Typeset copy is fitted to the page, and illustrations are finished in enough detail to show how the printed manual will look. The camera-ready mechanical is prepared from the approved comprehensive dummy. Finally, the camera-ready mechanical is sent to the Training and Doctrine Command, which takes care of quality control, printing, and distribution.

This entire process is time-consuming. A new manual may take from 26 to 39 months from the outline stage to the manual's final distribution. Reducing this development time has become especially important, because how-to-fight manuals need to get to the field

quickly to keep up with the Army's force modernization efforts. Sometimes some of the steps in the process are combined to get a new or revised manual to the field earlier. Any new technological improvements in production are also used to reduce the development time.

The Infantry School has propensity for a number of how-to-fight manuals. The current status of these manuals is shown on the accompanying chart.

To help commanders in the field make the transition to Division 86, the Infantry School is also developing manuals for the battalion task force, the company team, and the platoon and squad. These are being developed in three phases:

- Phase I includes three H-series TOE how-to-fight manuals for use by Active Army and Reserve Component units that will still be equipped with the M113 armored personnel carrier and the M60 tank until they convert to the J-series TOE. These manuals are FM 7-7, FM 71-1 and FM 71-2.

- Phase II includes three J-series TOE (interim) how-to-fight manuals for units that are equipped with various mixtures of vehicles (M113s and Abrams tanks, or Bradley IFVs and M60 tanks) until they fully convert to the J-series. These manuals are Transition Text (TT) 7-7J, TT 71-1J, and TT 71-2J.

- Phase III includes three J-series TOE how-to-fight manuals to be used by units that are organized under the J-series TOE and equipped with the Bradley and the Abrams. The three manuals in this group are FM 7-7J, FM 71-1J, and FM 71-2J.

Input from the field is a vital part of doctrine development. Anyone who has questions or comments about a specific manual is invited to send them to the following address:

Commandant

U.S. Army Infantry School

ATTN: ATSH-B-ID

Fort Benning, GA 31905

Telephone calls are always welcome: AUTOVON 835-7114/5783.

FM NUMBER	TITLE	STATUS
FM 7-7	(Phase I) The Mechanized Infantry Platoon/Squad (M113)	Under review. Final draft will be available in early 1983.
TT 7-7J	(Phase II) The Mechanized Infantry Platoon/Squad (M113-J Org)	Available in early 1983.
FM 7-7J	(Phase III) The Mechanized Infantry Platoon/Squad (BIFV)	Fielded as ST in late 1980. Under revision. Final draft will be available in early 1983.
FM 71-1*	(Phase I) The Tank and Mechanized Infantry Company Team	Preliminary draft fielded September 1981. Coordinating draft distributed August 1982. Final draft available in early 1983.
TT 71-1J	(Phase II) The Mechanized Infantry Company Team	Development under way. Coordinating draft distributed September 1982. Final draft available in early 1983.
FM 71-1J	(Phase III) The Tank and Mechanized Infantry Company Team	Not available until 1986.
FM 71-2*	(Phase I) The Tank and Mechanized Infantry Battalion Task Force	Not available until 1986.
TT 71-2J	(Phase II) The Mechanized Infantry Battalion Task Force	Development under way. Coordinating draft distributed July 1982. Final draft available in early 1983.
FM 71-2J	(Phase III) The Tank and Mechanized Infantry Battalion Task Force	Not available until 1986.
FM 7-8	The Infantry Platoon/Squad	Fielded as FM in December 1980. Current as is.
FM 7-10	The Infantry Rifle Company	Current as is. Was distributed as FM in April 1982.
FM 7-20	The Infantry Battalion (Inf., Abn, Air Asslt)	Final draft distributed in 1982-1983. Final print will be available in early 1984.
FM 7-85	Ranger Operations	Draft available in 1984.
FM 7-999A	Tactical Employment of Mortars	Coordinating draft in process. Available in early 1983.
FM 21-75	Combat Skills of the Soldier	Final print in late 1983.
FM 57-38	Pathfinder Operations	Final print in late 1983.
FM 90-4	Airmobile Operations	Current as is. Fielded in October 1980.
FM 90-5	Jungle Operations	Fielded in August 1982.
FM 90-8	Counterguerrilla Operations	Outline under development.
FM 90-10-1	An Infantryman's Guide to Urban Combat	Fielded in November 1982.

\*Note: FM 71-1 and 71-2 are co-produced by the Infantry School and Fort Knox.

CAPTAIN TERENCE N. THOMAS is a writer of infantry doctrine at the U.S. Army Infantry School. A 1977 ROTC graduate of Widener College, he has also completed the Infantry Officer Advanced Course. He has served as a rifle platoon leader, a weapons platoon leader, a company executive officer, and a battalion S4.

# Running Shoes in PRT

CAPTAIN MICHAEL L. SCHANY

The objectives of Initial Entry Training (IET) are to produce soldiers who are well-disciplined, highly motivated, physically and mentally fit, and adept at the combat skills they will need on the modern battlefield. IET programs of instruction are designed to accomplish these objectives and to get the new soldiers to their assigned units with as little delay as possible. But when some of the soldiers have to miss training because of injuries, it is difficult for them to make up that training so they can graduate on schedule.

Because foot and leg injuries were the root cause of missed training among its soldiers, the Third Basic Training Brigade at Fort Leonard Wood, Missouri, conducted a number of experiments to determine what, if any, advantages might come from having its soldiers wear running shoes instead of combat boots during

their physical readiness training (PRT).

First, the brigade conducted a series of seminars that were open to anyone who wanted to discuss PRT policies or training. After each seminar the ideas presented were compiled in draft form, together with the most current guidance from higher headquarters. This draft of policies was revised after each seminar and eventually was formulated and implemented as the Brigade PRT Program (Test).

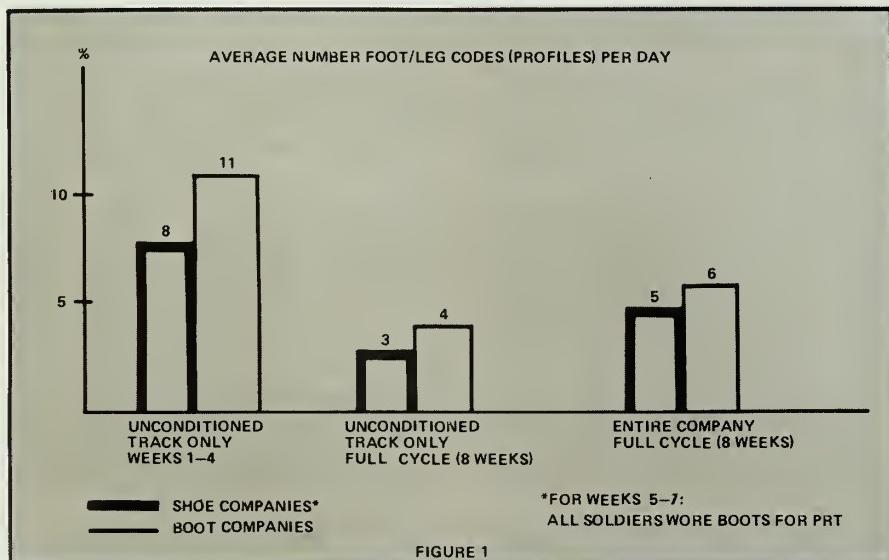
The program was primarily aimed at the "unconditioned" soldiers — those who, by definition, could "take in no more than 25 milliliters of oxygen per kilogram of body weight per minute." This definition was translated to mean soldiers who could not complete a one-mile run in ten minutes or less.

Each battalion in the brigade

designated three companies to take part in the program. One company would follow the brigade's test program with its unconditioned soldiers wearing running shoes; a second company would follow the test program with the whole company in boots; and the control company would follow the normal PRT program with all of its soldiers in boots. (It should be noted here that basic training at Fort Leonard Wood includes female soldiers.)

The soldiers in these three companies were given a diagnostic PRT test within one week of their arrival. All of the soldiers who could not complete the one-mile run in ten minutes were put in one group or track within their companies for the subsequent PRT periods. This unconditioned group was then required to take PRT at least four times a week, and the soldiers could not be moved out of the group until they took a second diagnostic test in their fourth week of training. (After the second test, all the soldiers in the three companies wore combat boots for the rest of the cycle.)

Statistics were kept on the soldiers who went on sick call and on those who received medical profiles (codes) for foot or leg problems. When this information had been consolidated, foot and leg injuries among the unconditioned soldiers who started out wearing running shoes could be compared with such injuries among the unconditioned soldiers who wore boots from the beginning. Then these unconditioned soldiers were also compared with the rest of the soldiers



in their respective companies.

Figure 1 shows these comparisons for the first four weeks (unconditioned track only), for the next four weeks (unconditioned track only), and for the entire eight-week cycle (companies as a whole). Figure 2 is a comparison of the two kinds of test companies in terms of the average number of codes per week for the entire cycle.

When all the data had been analyzed, there were few statistically significant differences between the "shoe" companies and the "boot" companies, or between the test companies and the control companies. Nevertheless, several general conclusions could be drawn from the statistical data and from the test observations made by the chain of command and the unit cadre.

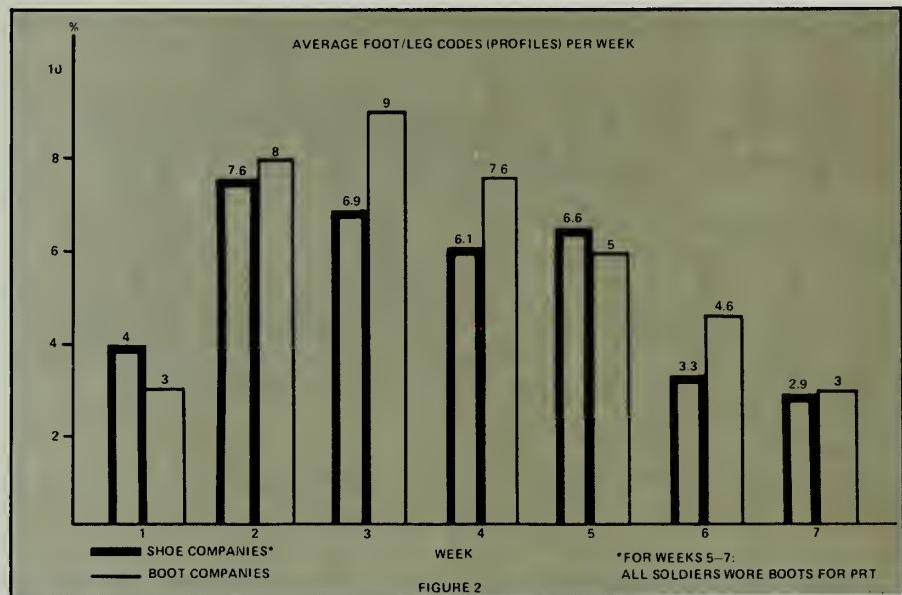
- The test conclusions supported earlier findings that females have more problems with wearing boots than males have. (Females generally made up about 85 percent of the unconditioned tracks.) And whether they wore running shoes or boots, the unconditioned soldiers had considerably more injury problems than those in the conditioned tracks.

- There appeared to be more codes and sick calls during the first two or three weeks, and then a large drop in them during the fourth week. This finding seemed to correspond with earlier studies that indicated the third week should include a period of rest or of relatively easy PRT to allow leg bones to heal and toughen in preparation for the stress of the rest of the training.

- The average number of weekly sick calls in the running shoe companies was equal to or less than the number in the boot companies.

- The scores on the end-of-cycle APRT (in which all the soldiers wore combat boots) showed no significant differences between the running shoe companies and the boot companies.

The chief benefit derived from the test was that it served to make the entire chain of command more aware of PRT performance and of PRT-related injuries. For example, the im-



portance of using stretching exercises became apparent. Commanders and drill sergeants felt that such exercises helped decrease the number of leg injuries.

In addition to the three companies per battalion that participated in the test, two other companies followed the brigade's test program with all their soldiers in running shoes for the first four weeks. These units showed certain significant results that the other test companies did not. First, there were fewer codes in the conditioned tracks of these companies than in the test companies whose conditioned soldiers wore boots. In two such test companies, nearly 15 percent of the soldiers who were initially placed in conditioned, boot-wearing tracks had to be moved to the unconditioned track because of injuries. In addition, the companies in which running shoes were worn initially had shorter run times on the APRT (even though they wore combat boots for the test). Finally, the use of running shoes for all the soldiers in a company seemed to help build unit spirit and a desire to run, because it prevented morale problems associated with being "different." (Some of the soldiers in the unconditioned tracks in the other test companies said they felt like second-class citizens because they were "not allowed" to wear boots.)

In the final analysis, the program

showed that some soldiers will be injured no matter what kind of program is used, because there are many variables over which the trainers have no control. Some of these are congenital defects (such as flat feet), variances in the conditioning of the soldiers when they enter the Army, and training accidents.

But careful consideration of the ways in which injuries can be prevented — such as the use of running shoes — and a concerned chain of command can help reduce injuries. Fewer injuries lead in turn to better morale and fewer training management problems with those soldiers who have had to miss some phase of their training because of injury.

The use of running shoes in basic training is, if nothing else, another training management tool that commanders can use when they believe it will help them turn out properly trained soldiers on schedule — soldiers who are ready to take their places in units around the world.



CAPTAIN MICHAEL L. SHANY, who previously served with the 3d Training Brigade at Fort Leonard Wood, Missouri, is now assigned to the Tank Automotive Systems Laboratory in Warren, Michigan.

# Lessons from the IDF

CAPTAIN JAMES R. ROWLAND

CHIEF WARRANT OFFICER-2 WILLIAM G. BLEDSOE

Some time ago, we had an opportunity to spend several weeks with an armored brigade of the Israeli Defense Force. During that time, we observed and participated in training situations from which we believe the U.S. Army can learn several important lessons about how to protect its soldiers better — in their tanks, in their command vehicles, and in their evacuation vehicles.

First, the IDF conducts drills to teach its tank crews to react quickly to any emergency in the turret. Through these drills, conducted in daylight and in darkness, each tank crew becomes thoroughly familiar with its crew compartment. Whether the announcement is "fire in the crew compartment" or "tank round in the engine," the reaction of the men is unified and well rehearsed.

One thing that helps this training process is standardization. Each tank in the IDF has a load plan that is identical to that of all the other tanks in the Armor Corps. This enables the soldiers to remove wounded or dead crewmen from a damaged tank, complete minimal repairs, and put in a new crew that does not need a long time to become thoroughly familiar with the vehicle's organic equipment.

In conjunction with these crew drills, the Israelis spend additional training periods evacuating crewmen with simulated wounds from all positions within the tank. They try for speed in these exercises, but they also use another interesting indicator to

judge the effectiveness of the training. They feel that the crewmen are learning where each item is located in the compartment if there are no grease marks or cuts on their forearms — marks and cuts that might be caused by having to search for something while moving fast. The Israelis feel that if their crewmen are to react quickly in the event of hostilities, each of them must learn the location

demonstrated. During the planning phases of one ARTEP in Europe, for example, a unit set as one of its training goals the identification, location, and evacuation of 24 soldiers per day. In actual practice, only two to four soldiers were evacuated per day. This was partly because some of the field medics were unable to read a map properly, but also because the means of evacuation were inadequate for the number of casualties generated.

Obviously, a battalion-sized unit in contact with an enemy force can expect to sustain more than 24 casualties per day. What is needed, then, is not additional training but more intensified training, such as crew compartment familiarization and "buddy" medical skills.

A second lesson we can learn concerns the use of NOMAX fire retardant suits. Almost all Israeli armor crewmen and rear echelon soldiers wear these suits. Our soldiers, too, should have them, and the sooner, the better — and not just those in the front-line units. Even with the NOMAX uniforms, the number of burn casualties generated in a modern-day tank war can quickly overburden the existing medical capabilities.

The Israelis can also teach us something about the size a tactical operations center (TOC) should be. Although they use M113 APCs instead of M577s for their command posts, their brigade CPs are usually no larger than our company CPs. If

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### **The U.S. Army can learn several important lessons from the IDF about how to protect its soldiers — in their tanks, in their command vehicles, and in their evacuation vehicles.**

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of his water bottle, extra ammunition, grenades, small weapons, and first aid kit.

At a time when our own forces in Europe are hamstrung by a lack of funds for large maneuvers, trainers there could use crew drills such as these to familiarize their armored crewmen with particular tasks. And during evacuation drills, medical personnel could teach "buddy first aid" and at the same time familiarize themselves with the crew compartments of the vehicles.

The need for such training has been

there is a war in Europe in any of the proposed variations, our present TOCs will be entirely too large, and, therefore, will be lucrative targets. And commanders who insist on using their jeeps or helicopters for getting around the battlefield, as some still do, will find it difficult not to become targets. In Israel, few commanders at any level ever maneuver in vehicles other than their tanks or APCs.

Another important point is that the Israeli APC has been altered in several ways. The most interesting one has to do with the cargo hatch, which also serves as a map board. This enables the commander and his S3 to work off the same map and still maneuver and advise different subordinate units by radio.

We also need to do something about our present medical evacuation vehicle, which, in Europe, is the M113 identified by a red cross on a white background. One problem is that this vehicle usually carries few of the mandatory items essential to



emergency medical care. Another is that the very noticeable red cross makes the vehicle an easy target, and it has no defensive weapon on board. To make this vehicle more useful and more survivable, we might consider the following changes:

- Add battery- or vehicle-powered onboard suction.
- Provide adequate medical lighting.
- Extend its medical-surgical capabilities, including IV solution.

- Add modern splint sets and litter capabilities.

- Mount a defensive weapon such as the .50 caliber machinegun on it.

- Eliminate the uncamouflaged red cross marking.

Many of the things the Israelis are doing today the U.S. Army did 35 years ago. Unfortunately, we seem to have forgotten most of them.

If we are to maintain combat readiness, we will have to place more emphasis on quality training for protecting our soldiers and leaders, and for training them to protect themselves.

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**CAPTAIN JAMES R. ROWLAND** has served in several armor assignments from platoon to division level and now commands a basic training company at Fort Jackson, South Carolina. He is a graduate of New Mexico Military Institute, the Citadel, and the Command and General Staff College.

**CHIEF WARRANT OFFICER 2 WILLIAM G. BLEDSOE** is a certified physician's assistant with the 1st Squadron, 1st Cavalry in Germany.

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## TOW Tracking Skills

**CAPTAIN PAUL A. PETZRICK JR.**

If he is going to be successful on the modern battlefield, a TOW gunner must be able to track a moving target. Unfortunately, he must get in a great deal of tracking practice if he is going to retain his skill once he has acquired it. And getting that practice is not easy.

One problem is space. Tracking exercises normally require an area at least 300 meters deep and 500 meters wide. In some cases, the depth should even be extended to 3,000 meters; in garrison, such areas are hard to find.

What is needed, then, is a system that will allow for the most tracking

time and that can also be employed in a small area, inside or outside. A motorized scale tracking set, such as the one developed by the antitank platoon of the Combat Support Company, 2d Battalion (Airborne), 325th Infantry, 82d Airborne Division, is such a system. The set, which consists of an electric train set and scale model tanks, allows a TOW gunner and crew to be placed in simulated combat situations. It can be used in an area less than 10 meters wide and 100 meters deep, a size that is available to most units in garrison. The set also allows a gunner to practice armored

vehicle identification and to engage targets moving at realistic speeds toward him, away from him, or across his front.

The set consists of five components: a 1/35 scale model tank, an electric motor, a transformer, some "O" gauge track, and several terrain mockups.

The "O" gauge track provides a stable target platform for the model tank, and the electric motor found in a small locomotive will fit inside the tank model. The only modification necessary is to remove the body of the locomotive, normally held on by

several screws. Then the electric motor can be attached to the tank model.

The transformer is needed to power the tracking set. Most transformers available run off a 120-volt source, which means they can be employed with a field generator as well as with AC current inside.

The accompanying chart gives the length of track needed for given tracking periods and speeds. The lengths of track shown are for single straightaways only. The tracking times selected (17, 11, and 6 seconds) represent the time of flight for a TOW to ranges of 3,000, 2,000, and 1,000 meters. The maximum speed of 30 miles per hour is based on the probable cross-country and combat speeds for modern tanks. (These figures were obtained by multiplying the tracking time by the target speed and then that total by a conversion factor of .55. Other tracking times and speeds can be calculated the same way.)

The simplest track design is an oval. This presents the gunner with target runs of equal time and in dif-

TRACKING TIME (seconds)	TARGET SPEED (mph)	LENGTH OF TRACK (in/ft)
17	30	280.5/23.4
	20	187.0/15.6
	10	93.5/ 7.8
11	30	181.5/15.2
	20	121.0/10.1
	10	60.5/ 5.1
6	30	99.0/ 8.3
	20	66.0/ 5.5
	10	33.0/ 2.8

ferent directions. Although the track design may be varied with additional curves and such, realistic lengths must be maintained.

Terrain mockups such as hills, woods, buildings, and smoke can be used to supplement the track. These mockups can be simple cardboard cutouts in the shapes of typical obstructions, and can be varied in size and location to present different, realistic situations to a gunner and his crew.

If there is only enough track for an oval of minimum size, situations can be varied not only by changing the terrain mockups but by changing the speed of the target vehicle. This presents a gunner with a target that

seems to stop, fire, and move out at a fast rate.

The cost of one of these sets is small — about \$250. This includes a tank model, 64 pieces of 9-inch track, 8 pieces of curved track, a heavy duty transformer, and a small locomotive. This cost is quite small compared to other TOW or Dragon training equipment. Ideally, each battalion should have at least one set.

A motorized scale tracking set is not a cure-all for the problem of keeping gunners proficient at tracking, but it does allow a unit to make the most of the time and space it has. Because of its small cost and its realistic training value, and because it can be used in garrison as well as in the field, the set is a valuable training resource.

**CAPTAIN PAUL A. PETZICK, JR.**, now a company commander in the 1st Cavalry Division, previously served as a TOW platoon leader for 17 months. A 1977 graduate of the U.S. Military Academy, he has completed the Infantry Officer Advanced Course and the 82d Airborne Division's Antiautomor Leaders' Course.

## Deflection Scale Board

MAJOR MARK S. FLUSCHE

On the future AirLand battlefield, the 81mm mortar section can expect to move frequently. Hipshooting will probably be the rule rather than the exception, and a highly trained fire direction center will be an absolute necessity.

Unfortunately, the present M16 Plotting Board is slow to use and hard to understand; soldiers frequently have difficulty solving a gunnery problem on its rotating disc.

But there is a rather simple solution

to this problem: A field artillery deflection scale board can be modified so that it can be used with mortars. The only things needed are a sheet of plywood about 19 inches wide and 21 inches long, a Graphic Training Aid (GTA) 6-5-1 (Multi-purpose Protractor), a DA Form 4176 (target grid), a small nail, map tacks, masking tape, frosted contact acetate, flat white paint, a Graphical Firing Fan (GFF), and a vertex pin. (The latter two items can be borrowed

from a 4.2-inch mortar section.)

Just about anyone can make one of these boards by following these instructions:

First, paint the working surface of the board with the flat white paint. Once the paint is good and dry, place the left edge of the GFF roughly parallel to the long side of the board and secure it with the vertex pin midway along and one and one-half inches in from either 19-inch side.

Draw two 1,000-mil-wide deflec-

tion arcs, graduated in 10-mil increments, at distances of 6 and  $17\frac{1}{2}$  inches from the vertex pin. (All 50- and 100-mil increments should be indicated by strokes longer than the 10-mil graduations.) Mark the 100-mil graduation with the base deflection of the weapon system (2800 mils), and label the remaining 100-mil increments, with the left-hand increments as 3300 mils and the right-hand as 2300 mils.

Carefully separate the GTA azimuth disc from the range arm, and select a nail that closely fits the vertex hole of the range arm. Remove the GFF and the vertex pin and drive the nail exactly into the hole left by the pin.

Prepare the range deflection arm by taping over the numbers printed on the range arm of the multipurpose protractor, and then renumber the scale to 1:12,500. (This renumbering is quite simple, since the scale was originally graduated every 100 meters and these graduations now become 25-meter increments at 1:12,500.) Mark the maximum range of each desired charge and cartridge combination on the range deflection arm to make it easier to select the charges. Cover the deflection scale board, the range deflection arm, and the target plotting grid with frosted contact acetate to protect them from the weather and to permit penciled notes to be made on them.

Once the deflection scale board has been constructed a mortar section conducting an emergency fire mission can use it for both of its primary technical fire direction tasks: To determine initial firing data to the target, and to compute subsequent data based upon the observer's corrections. Here is how to do it:

For the initial round, select the mounting azimuth based either on the measured azimuth from the firing position to the map grid location of the target or on the azimuth to the center of sector. (Grid location is preferred because the first round engages the target directly.) Announce the mortar base deflection (2800 mils) and the elevation corresponding to

the range from the firing point to the target or the center of sector as elements of the initial fire command.

To use the deflection scale board to compute subsequent corrections, first place the vertex of the range deflection arm over the nail to represent the center of the section's firing position and align the left edge of the arm on deflection 2800 on either deflection arc.

Stick a pin next to the range deflection arm opposite the range to the target or the center of sector. This pin represents the location of the first round and, ideally, the target. Then center the target grid over the first round pinhole and align the 0-3200 line with the left edge of the range deflection arm. The arrow on the target grid points away from the vertex in the direction of fire.

Place a second pin opposite the graduation on the scale of the target grid corresponding to the mounting azimuth. This pin represents grid north with respect to the mounting azimuth and is used as the north index. It may be necessary to move the range deflection arm to place the pin.

Finally, rotate the target grid until the graduation corresponding to the observer-to-target direction is opposite the north index point, and tape the grid in place. Read Angle T off the target plotting grid under the left edge of the range deflection arm. To determine firing data for subsequent corrections, plot the observer's corrections on the target plotting grid, move the left edge of the range deflection arm to the new pin location, and read a new deflection, range, and charge. Visually interpolate, as necessary, to determine the deflection and the range. (Accuracy within 3 mils and 25 meters of M16 Plotting Board data is easily attainable.) Extract the elevation from the tabular firing table (FT 81-AI-3) for the determined charge and range combination, and announce the new firing data to the guns.

To use the deflection scale board for a subsequent mission, tick-mark the final pin location for the target and construct a north index. Center

the target grid over the final pin location, realign the 0-3200 line with the left edge of the range deflection arm, convert the final deflection to azimuth, and construct the north index opposite the final azimuth. This allows future targets to be located by shifting from a known point.

The deflection scale board cannot compute all fire missions, of course, because it lacks a 6400-mil capability, and it has obvious problems with durability. But it does offer definite advantages as a supplementary means of fire control and as a tool in classroom instruction. In action, mortars can be mounted on the exact azimuth to the target; there is no need to round the azimuth to the nearest 50 mils as is required with the M16 Plotting Board. The elimination of this rounding procedure results in a more accurate first round and a faster fire-for-effect.

In a training class, each soldier can use expendable material to construct his own board and then he can keep it for training. The deflection scale board provides him with a solution to a gunnery problem that is easier to understand than the M16 Plotting Board is, since the locations of the gun, the target, and the observer-to-target direction are shown in their proper perspective. The soldier's future training with the firing chart is also improved because of similarities between the deflection scale board and the chart.

Anyone who is having problems with slow "hipshot" times or with student learning difficulties in their fire direction center training should try using one of these modified deflection scale boards.



MAJOR MARK S. FLUSCHE is an assistant TRADOC System Manager for field artillery tactical data systems at the Field Artillery School, Fort Sill, Oklahoma. A 1969 ROTC graduate of St. Mary's University in San Antonio, Texas, he also holds a master's degree from Central Michigan University.

# Range Checklist

MAJOR JAMES W. TOWNSEND

Early in their careers, young lieutenants can expect to find themselves with the responsibility for setting up and running a live fire range. In those situations, a range checklist can be of tremendous help. Fortunately, most units have one. (See, for example, "Everything You Wanted to Know About Ranges," by Captain Eric E. Holderman, INFANTRY, September-October 1979, pages 27-30.)

The checklist shown here was used by a unit I served with in Germany. Although most of the items are self-explanatory, a few need a little further explanation.

- Ammunition points (Item 1) must be properly set up and guarded. Nothing should be left to chance in this area.

- Transportation (Item 2) includes the movement of the range personnel, the target details, the equipment, and the soldiers who will be firing.

- The medical vehicle (Item 4) should be equipped to carry litter patients. The medical personnel should have a map of the area and should know the quickest route to the nearest hospital.

- Overlays (Item 8) may be required on ranges that include maneuver or non-standard firing positions.

- A unit armorer (Item 9), with his tools and a supply of spare parts, should be present during all live firing exercises. When .50 caliber machine-guns, Dragons, or TOWs are to be fired, a weapons repair contact team

## RANGE CHECKLIST

1. Ammunition, ammunition point, guard, fire extinguisher
2. Transportation
3. Red flag or red light
4. Medical personnel with medical vehicle and map
5. Range map and compass
6. Field telephone and field wire
7. Radios and transmission logs
8. Overlay approved by range control (if appropriate)
9. Armorer with tools and spare parts
10. Weapon oil and cleaning rods
11. Unit tactical sign
12. Opening and closing checklist
13. Range regulations and range bulletins
14. Binoculars
15. Targets
16. Target detail
17. Field Manuals and Technical Manuals for weapons being fired
18. Concurrent training plan
19. Training and evaluation outlines
20. Score sheets
21. Safety officer or safety noncommissioned officer
22. Safety briefing
23. Latrine supplies
24. Whistle or bullhorn
25. Food
26. Road clearance
27. Asbestos gloves

from the direct support maintenance battalion should be requested.

• Range regulations and range bulletins (Item 13) are provided by the controlling headquarters. Regulations give the rules for conducting firing; bulletins give the current control information including schedules, road barrier details, and special requirements.

Planning and conducting range firing is not difficult if the overall problems of the range are divided into small blocks. This checklist helps to do just that.

It also helps the range officer to

follow Rogers Rangers' first standing order: "Don't forget nothing."



**MAJOR JAMES W. TOWNSEND** is assigned to the U.S. Readiness Command at MacDill Air Force Base, Florida. A 1969 ROTC graduate of Texas A and M University, he has served as commander and as S3 of a mechanized infantry company and as a Ranger instructor. He holds a master's degree from Georgia State University and has completed the Armed Forces Staff College.

# ENLISTED CAREER NOTES



## PROFESSIONAL DEVELOPMENT

In previous issues of INFANTRY, Infantry Branch has provided recommendations to the field on ways in which an enlisted soldier can improve his career potential. One of these ways is to be aware of the tools that others use to evaluate that potential.

Some important instruments in this process are senior enlisted evaluation reports, service school academic evaluation reports (DA Form 1059), and current medical evaluations (including height and weight standards). In addition, favorable correspondence and a current photograph in the soldier's official military personnel file always help.

One of the best ways for a noncommissioned officer to make his wishes and goals known in regard to service schools and desired duty positions is through his DA Form 2635 preference statement. He can also receive career guidance from his supervisor in these matters.

Another tool that will soon be available is a professional development pamphlet, which is being prepared by the Infantry Proprietary Office at Fort Benning. This pamphlet will explain and graphically show ways in which the Infantryman can develop more professionally.

## MP AND MI AIRBORNE OPPORTUNITIES

Because of a shortage in MOSs 17K, 97B, 98C, 98J, and 95B, the Military Police and Military Intelligence Branch of MILPERCEN is looking for volunteers for these MOSs.

As an added incentive, all volunteers, if they are eligible for the vacan-

cies, will be offered a chance to attend the three-week airborne course at Fort Benning, Georgia.

Eligible soldiers must comply with procedure 3-19 of DA Pamphlet 600-8. Their personnel files should be reviewed at local personnel offices to verify their qualifications in accordance with AR 614-200. These personnel offices can also offer advice on the special pay and promotion incentives for airborne-qualified soldiers.

The soldiers who are accepted for this program will get stabilized assignments either at Fort Bragg, North Carolina, or at Fort Devens, Massachusetts, after completing their airborne training.

Any soldier who is interested should submit DA Form 4187, a current copy of DA Forms 2 and 2-1, DA Form 705, and Standard Form 88 through channels to MILPERCEN, ATTN: DAPC-EPT-F, 2461 Eisenhower Avenue, Alexandria, VA 22331.

## NEW REGULATION ON SEPARATIONS

Several changes on administrative separations for enlisted soldiers became effective 1 October 1982. These changes, which are included in the new AR 635-200, Personnel Separations — Enlisted Personnel, broaden the commander's authority to order separation but still protects the rights of the soldier.

The new regulation establishes a procedure for notifying soldiers of separation actions and allows separation authority to be delegated to the battalion commander in some cases.

The notification procedure requires a commander to notify a soldier in writing of all his rights when a separation action may result in less than an

"honorable" character of service. This does not apply to separations for expiration of term of service (ETS), which now must be characterized as "honorable."

Commanders with the rank of lieutenant colonel or higher who have a judge advocate or legal advisor available to them may order separation in many cases. Among these are cases involving pregnancy, alcohol or drug abuse, trainee discharge, unsatisfactory performance, and selected changes in service obligations such as accepting a commission. Unit commanders may still separate soldiers for immediate reenlistment.

Although both the expeditious discharge program and unsuitability discharges (Chapter 13) have been deleted, the trainee discharge program has been retained, and unsatisfactory performance is covered in Chapter 13 of the new regulation.

Determinations of unsatisfactory performance must now focus on the soldier's actual duty performance, not on his personality as was the case with unsuitability discharges.

Soldiers who separate within the first 180 days of continuous service because of unsatisfactory performance or minor disciplinary infractions will receive "uncharacterized" separations. These are known as entry-level separations and include trainee discharges.

The criteria for separations for misconduct have been broadened to include minor infractions, patterns of misconduct, and committing serious offenses. In the past, separation criteria such as AWOL, indebtedness, or child abuse were specifically stated. Now commanders have more latitude in determining whether a soldier's conduct warrants separation action.

A new chapter on defective enlist-

## **ENLISTED CAREER NOTES**

ments has been incorporated for processing erroneous, minority (under age 17), and fraudulent entry separations, as well as separations for breach of enlistment contracts. Formerly, fraudulent entry was included under "misconduct," while erroneous enlistments and breaches of contract were considered "convenience of the government" separations.

A significant change allows enlisted soldiers above the rank of sergeant first class/platoon sergeant to be members of administrative separation boards. But most of the board mem-

bers must still be commissioned officers. Another change provides that any soldier who remains in the Army until ETS will receive an "honorable" character of service. In the past, commanders could authorize a general discharge at ETS.

While there may be some initial confusion in implementing the new regulation, users will probably find it easier to read and understand once they have become familiar with the changes. (Separation actions that were begun before 1 October 1982 must be completed under the old regulation.)

MILPERCEN's Enlisted Personnel Management Directorate recently became the proponent for AR 635-200 and also the authority for all individual cases of exception to policy which require decisions at Department of the Army level.

For more information, anyone who is interested can write or call MILPERCEN, DAPC-EPA-A, AUTOVON 221-8410 (for information on general provisions) or AUTOVON 221-8739 (for information on individual cases).

## **RESERVE COMPONENT NOTES**

### **NOTES FROM RCPAC**

Infantry Branch at the Reserve Components Personnel and Administration Center (RCPAC) is interested in seeing that all infantry Reserve Component soldiers get the training they need.

U.S. Army Reserve enlisted men should call or write their personnel management officers at RCPAC for information concerning troop unit vacancies, counterpart training opportunities, military schools, promotions and benefits, and other related Reserve information.

The point of contact at Infantry Enlisted Branch is SFC Larsen. His mailing address is:

Commander  
U.S. Army RCPAC  
ATTN: AGUZ-OPC-IN  
9700 Page Blvd.  
St. Louis, MO 63132

Telephone numbers are Tollfree 1-800-325-4750 or AUTOVON 693-7591.

affect most of these tests starting in February 1983. These changes should make the administration of SQTs easier and more flexible for USAR units.

Hands-on testing will be decentralized and totally controlled by the trainers. It will be based on the Soldier's Manuals and, as the manuals are updated, guidelines will be included. Commanders will be able to decide what individual skills to evaluate and when to conduct hands-on training.

Written tests for MOSs will be taken by all Army Reserve unit soldiers in skill levels 1 through 4. These tests are intended to provide an objective indication of an individual's MOS proficiency for use in promotion and other personnel management decisions. They will be given during a three-month period instead of a nine-month period as they are now.

Each SQT will measure a sampling of tasks, tasks that will be made available to units at the start of the test period.

Each enlisted member of a USAR unit will also take an annual common tasks SQT. This test will be, nominally, a hands-on evaluation conducted by unit trainers, and it can be given at

any time during the year. For units that lack the necessary facilities and equipment, an alternate written examination will be made available.

### **TRAINING FOR AVIATION UNITS**

Aviation units are being urged to conduct combined arms operations training with the units they are expected to support. To meet this goal, commanders of USAR aviation units should look for opportunities to transport troops and their equipment whenever possible during their unit training.

Commanders of USAR ground units are encouraged to plan airmobile operations and to ask for their share of airmobile support during training exercises.

Department of the Army officials expect the commanders of aviation units and ground soldiers to communicate better so that airmobile operations can be planned better. Leaders at all levels in the USAR chain of command should use their staffs to help implement combined arms training.

### **SQT CHANGES**

Changes are being made in Skill Qualification Tests (SQTs) that will

# OFFICERS CAREER NOTES



## BRANCH CHIEF'S NOTES

The Greek philosopher Aristotle once stated that change was the only constant in the material world, and these views apply equally well to the Army's personnel management system. Recently, several policy changes have been directed that are of special interest to field grade officers. These changes involve command selection, standby advisory boards, and staff college eligibility.

The Centralized Command Selection System was instituted in 1975 to select the best commanders to lead our soldiers. Three separate Department of the Army (DA) boards now select officers to command combat arms, combat support, and combat service support units.

The length of a battalion command tour has now been extended to 30 months, plus or minus six months, except for those in the battalions in Korea, where the tour length is still 12 months. Although this lengthening of command tours has reduced the opportunity for officers to command, it has also greatly improved the stability and cohesion of the chain of command.

Generally, all promotable majors and all lieutenant colonels who have not yet commanded an OPMS-designated battalion are eligible for consideration until they have completed their 21st year of promotion list service. Each officer is considered for command in both of his specialties. For example, an Infantry (Specialty 11) officer whose additional specialty is Military Police (Specialty 31) will be considered for both types of command. If he submits a written request to MILPERCEN, an officer may also be considered for command in a previously designated specialty.

An officer may decline considera-

tion for command without affecting his future eligibility by stating his request in writing. He may later revoke this request and be considered again, but an officer who declines command after he is selected will not be eligible for future consideration.

The battalion-level command selection board uses the "best qualified" method of selection. The board determines which officers are fully qualified for command and then lists them by order of merit based on a numerical evaluation assigned by each voting member.

The principal tools the selection boards use in making these determinations are the Official Military Personnel File (OMPF) and the Officer Record Brief (ORB). The OMPF is an officer's microfiche record which contains copies of his officer evaluation reports (OERs), awards, and decorations, along with any record of commendatory or disciplinary actions. The ORB provides a summary of the officer's assignment history, schooling, and other personal information. Additionally, a "hard copy" glossy photograph will now be used in the selection board deliberations rather than a microfiche copy.

The policy has also changed on alternate command selections. Officers who have been selected for alternate command are currently activated to fill unforeseen vacancies during the entire fiscal year for which they have command list status. Alternates are activated on the basis of their ranking on the list and of their qualifications and availability. The alternate officers who have not been activated by the time the next command selection board convenes are reconsidered if they are still eligible.

The new policy, however, directs that the alternate command list for the previous fiscal year be superseded

by the new list. In short, effective with the publication of the Fiscal Year 1985 command list, an officer's alternate status will begin and end with each list. Officers who are selected from the alternate command list but not activated will be reconsidered by subsequent boards if they are still eligible.

The Standby Advisory Boards have been discontinued for command and school selection and are now essentially re-look boards for officers who have not been selected for schools, command, or promotion. In the future, officers in their last year of eligibility who request and receive a re-look will be considered one more time by the next regular board. This policy change does not affect promotions. Standby Advisory Boards for promotion, now called Special Selection Boards, will still be convened as required by law.

## CSC Selection System

Other changes affect an officer's attendance at a command and staff college (CSC).

In 1980 the CSC selection system was changed to allow captains not yet selected for promotion to attend. This change was implemented in response to DOD guidance for full tour stability and also to the recommendations of the Review of Education and Training for Officers (RETO) study. But subsequent action to implement the Combined Arms and Services Staff School (CAS<sup>3</sup>), coupled with a policy for early CSC selection and attendance, gave company grade officers too many professional development goals to accomplish in too little time.

To help alleviate this assignment congestion and to allow more opportunity for the professional develop-

## OFFICERS CAREER NOTES

ment and utilization of company grade officers, the zone of eligibility for CSC selection has been changed. To be eligible an officer must now be a promotable captain with no more than 14 years of service.

Other features of the new CSC selection system are:

- Separate screening boards have been eliminated, because the modified zone of eligibility reduced the number of eligible officers and made the boards unnecessary. The records

of all eligible officers will be reviewed by the CSC selection board with a general officer as president.

- The use of an alternate list has been eliminated. The board will select a fixed number of officers who will be scheduled to attend CSC in accordance with stability guidance, operational requirements, and annual seats available. Replacement students will be selected from the list of principal selectees in accordance with slating guidance.

- Officers will still complete their normal tours of up to 36 months on station. As a result, some officers will be deferred but for not more than two years.

These policy changes have a direct effect on Infantry officers and on their professional development, and each should call or write his assignment officer with any questions he may have about these policy changes.

LTC JOHN F. CONNOLLY

## RESERVE COMPONENT NOTES

### NOTES FROM RCPAC

U.S. Army Reserve Infantry officers should call or write their personnel management officers at RCPAC for information concerning Reserve troop unit vacancies, counterpart

training opportunities, military schools, promotions and benefits, and other related Reserve information. (See accompanying telephone directory for points of contact.)

In particular, infantry lieutenants should call Major Lee for informa-

tion concerning new Reserve Special Forces qualification procedures.

Any officer who is being considered for promotion (see promotion board schedule) is reminded that he should have a current military photo in his official file.

### TELEPHONE DIRECTORY RCPAC — INFANTRY BRANCH

DESK/CMC(*)	OFFICER	AUTOVON	TOLLFREE (1-800)
Branch Chief	MAJ Bagley	693-7849	325-4890
LTC/101	MAJ Wynn	693-7849	325-4891
MAJ/102(00-49)	CPT Schumacher	693-7817	325-4892
MAJ/103(50-99)	MAJ Bryant	693-7817	325-4893
CPT/104(00-19)	MAJ Jackowski	693-7897	325-4886
CPT/105(20-39)	CPT Hogan	693-7814	325-4883
CPT/108(40-59)	CPT Coffin	693-7813	325-4881
CPT/109(60-79)	CPT Jacobs	693-7813	325-4894
CPT/110(80-99)	CPT Mosbacker	693-7814	325-4882
LT/106(00-49)	CPT Bigbie	693-7898	325-4889
LT/107(50-99)	MAJ Lee	693-7898	325-4887
ROTC Cadets	Mrs. Dunn		325-1879

\*Last two numbers of SSAN.

### 1983 SELECTION BOARD SCHEDULE

BOARD	CONVENES	ADJOURNS	PROMOTION ELIGIBILITY
1LT-CPT	11 Jan 83	28 Jan 83	15 May 84 or earlier
CPT-MAJ	8 Mar 83	8 Apr 83	15 May 84 or earlier
2LT-1LT	11 Apr 83	15 Apr 83	30 Sep 83 or earlier
Long Tour Applications	26 Apr 83	27 May 83	30 Sep 83 or earlier
2LT-1LT	15 Aug 83	19 Aug 83	31 Jan 84 or earlier
MAJ-LTC	7 Sep 83	7 Oct 83	31 Dec 84 or earlier
LTC-COL	18 Oct 83	18 Nov 83	31 Dec 84 or earlier
2LT-1LT	12 Dec 83	16 Dec 83	31 May 84 or earlier

The mailing address for inquiries is as follows:

Commander  
U.S. Army RCPAC  
ATTN: AGUZ-OPC-IN  
9700 Page Blvd.  
St. Louis, MO 63132

## MANDATORY EDUCATION

Too often an Army Reserve officer approaching the time when he is to be considered for promotion finds that he has not completed the mandatory education requirements.

During the past few years, thousands of Army Reserve officers have learned this cold fact the hard way — by not being selected for promotion when they were otherwise eligible. In 1981 alone, almost half of the captains who had reached their eligibility dates were not recommended for promotion to major solely because they did not meet the education standards.

But the education requirements for promotion are not that difficult, and the Army offers a number of convenient ways for an officer to fulfill these requirements:

**Officer Basic Course.** Before an officer can go from second lieutenant to first lieutenant, he must complete an officer basic course within three years after being commissioned. The basic

course is also a requirement for promotion to captain. The course can be completed in an Active Army resident program if funds are available or by correspondence courses.

**Officer Advanced Course.** To be promoted to major, an officer must complete an officer advanced course. He can complete this requirement in one of four ways, depending on funds and on which method is most convenient for him: He can participate in a USAR school or a correspondence program or he may be able to attend an Active Army resident course or a Reserve Component resident course.

(An IOAC-RC will be conducted during the period 1 May 1983 to 26 July 1983. Applicants must have had a physical examination within one year before the course begins. Individual Ready Reservists and members of Troop Program Units who are interested should submit DA Form 1058 through command channels by 1 March 1983.)

**Command and General Staff Officer Course.** To be eligible for promotion to lieutenant colonel, an officer must have completed at least half of a command and staff officer course. Or he can substitute either the Logistics Executive Development Course or the Associate Logistics Executive Development Course. (The first of these may be taken only in residence,

but the Associate Course combines correspondence course work with two-week resident phases).

Lieutenant colonels, to be promoted to colonel, must have completed the entire course.

The U.S. Army Command and General Staff College course can be completed through a USAR school program, a correspondence course, a combination of both, or by attending the resident course.

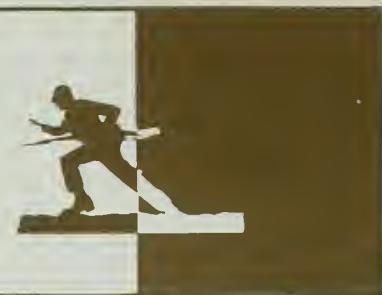
To enroll in the CGSC, an officer must write to the Registrar, U.S. Army Command and General Staff College, ATTN: ATZL-SWE-TM, Ft. Leavenworth, KS 66027.

All Reserve officers should plan their military education far enough in advance to make sure that they are educationally qualified by the time they are eligible for consideration by a promotion board. Selection boards consider officers for promotion during the calendar year preceding the year in which they will complete the required number of years of service. Education requirements must be completed no later than the date on which the board convenes.

For more information on any of these requirements, officers should call their nearest USAR school or their personnel management officers at RCPAC.



# BOOK REVIEWS



In our July-August 1982 book review section, we referred to the title of Ernle Bradford's book as being **HANNIBAL: THE GENERAL FROM ROME**. The correct title of that book is, of course, **HANNIBAL: THE GENERAL FROM CARTHAGE**. We apologize for our mistake.

In addition, in our September-October 1982 issue we said that David Trask, the author of **THE WAR WITH SPAIN IN 1898**, was a U.S. State Department historian, which he was when he wrote his book. But since then he has moved over to the Army and now serves as the Chief Historian with the Center of Military History.

---

**GENERAL JOHN SEDGWICK: THE STORY OF A UNION CORPS COMMANDER**, by Richard E. Winslow III (Presidio Press, 1982. 205 Pages). Reviewed by Professor Benjamin F. Gilbert, San Jose State University.

Originally a dissertation, this study is the first book-length biography of General John Sedgwick. Although his correspondence was published in two volumes eighty years ago, historians have neglected his career.

Born in Connecticut in 1813, Sedgwick attended West Point, graduating in 1837. He saw action in the Seminole and Mexican wars, and took part in various expeditions against the Plains Indians. By 1860 he had earned the rank of major and was considering retirement, but the outbreak of the Civil War caused him to remain in the Army.

During the spring and early summer of 1861, Sedgwick was confined to bed by a severe illness. Upon his recovery he served briefly on a court of inquiry and then in August 1861

was given the command of a brigade in the defenses of Washington.

In February 1862, General George B. McClellan, commander of the Army of the Potomac, relieved Brigadier General Charles P. Stone of his division and assigned Sedgwick to lead it. This he did through the Peninsula campaign and later at Antietam.

Given command of the 6th Corps, Sedgwick led it through the Chancellorsville, Gettysburg, Rappahannock Station, and Mine Run operations. His infantrymen referred to themselves as "Sedgwick's Cavalry," claiming "they were kept on the gallop."

On 9 May 1864, while conducting a reconnaissance at Spotsylvania, Sedgwick was shot and killed by a Confederate sharpshooter. General U.S. Grant, when he heard the news, reportedly said: "His loss to this army is greater than the loss of a whole division of troops."

Sedgwick was a competent leader of troops who was admired by his men and affectionately called "Uncle John." His remarkable career is objectively evaluated and vividly described in this fascinating biography, which Civil War enthusiasts should welcome.

---

**LEE: THE LAST YEARS**, by Charles Bracelen Flood (Houghton Mifflin, 1981. 308 Pages. \$14.95). Reviewed by Colonel Robert G. Clarke, Headquarters, CINCPAC.

Here is the story of a truly incredible man, a rebel against the United States but a man still admired and respected in both the North and the South.

The author begins his book with Lee's surrender at Appomattox and follows carefully the last five years of his life. In the process, he successfully

captures the strength and depth of Lee's character, and portrays him as a beloved commander and a leader who has an almost hypnotic effect on those around him. Thousands simply wanted to see or touch him as he passed.

Flood's main thesis is that Lee's example led the South through those early and difficult days of Reconstruction and greatly helped the South back into the Union.

Lee accepted the presidency of Washington College (now Washington and Lee University) and used his immense influence and his abilities as an administrator and educator to help the South repair itself and to rebuild its fabric. His presence and fatherlike leadership healed many postwar wounds and bridged the gap between North and South to a degree no other single person could have done.

By the spring of 1870, Lee's health was failing and he took a two-month vacation. He returned to the college for the fall term but was stricken with a cerebral thrombosis and died within a few days, on 11 October.

This is a warm and moving account of a great man's important last years. We see Lee clearly as the leader, the general, the father figure, and the great conciliator. The military professional should not miss this excellent book.

---

**THE UNION CAVALRY IN THE CIVIL WAR: VOLUME II, THE WAR IN THE EAST FROM GETTYSBURG TO APPOMATTOX, 1863-1865**, by Stephen Z. Starr (Louisiana State University Press, 1981. 526 Pages). Reviewed by Captain Don Rightmyer, United States Air Force.

With the passing of such eminent Civil War historians as T. Harry

Williams, Bell I. Wiley, and Bruce Catton, many people may feel that quality history on the Civil War period will disappear. Fortunately, that concern seems unfounded with historians such as Stephen Starr on the scene. This, his latest book, is proof of that fact.

This is the second of a planned three-part series on the Union cavalry in the Civil War. The first volume dealt with mounted operations from the war's beginnings through the battle of Gettysburg in July 1863. This second volume continues the cavalry story in the East through the end of the war. The third volume will look at the operations of mounted forces west of the Alleghenies.

The first volume in the series received the highest marks in a review by Bell Wiley that was published in *INFANTRY* in 1980. This second volume upholds the same standards of excellence.

The last two years of the cavalry war in the East included such men as Philip Sheridan, George Custer, George Crook, James H. Wilson, and other cavalrymen who played key roles in Northern cavalry operations. The author brings these men and the soldiers they led into focus as real people, not just statistics that moved around the countryside in a flurry of saddles and sabers.

Overall, Starr's second volume is an excellent coverage of a topic that is normally romanticized and given little serious treatment. Readers of this book will be eagerly awaiting the third volume.

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**ON STRATEGY: A CRITICAL ANALYSIS OF THE VIETNAM WAR,** by Harry C. Summers, Jr. (Presidio Press, 1982. 224 Pages. \$12.95). Reviewed by Dr. Joe P. Dunn, Converse College.

This book is one of the hottest commodities around. It is being reviewed in most of the military journals as well as in many academic and popular periodicals. For the most part, the reviews are laudatory. One enthusiastic reviewer even proclaims that the book will "not merely

become a seminal work on Vietnam; it will make history." The book obviously has official sanction, and it is making the rounds in the senior military colleges.

But I am astonished that such a mediocre study should attract this kind of attention, and I am concerned that such superficial analysis and shoddy scholarship has garnered this acclaim. It is not encouraging that this volume is the best that could emerge from study over several years at the Army War College.

It is not as though Colonel Summers has nothing to say. In fact, he makes a number of cogent points about the lack of an American military strategy in Vietnam, the weak, vacillating, politically motivated civilian leaders, the gimmickry that substituted for tactics, the self-imposed limitations on our military conduct of the war, and the surreal climate in which the conflict was conducted. But all of these points have been made repeatedly in a host of military memoirs. In addition, Leslie Gelf, Raymond Betts, Guenter Lewy, Larry Berman, and Dave Palmer have addressed these issues in a far better and more scholarly fashion.

Summers' book is essentially a polemic. Its journalistic tone, elementary development of arguments, weak documentation, and overall wandering nature weaken any serious consideration it might merit. A good editor would have sharpened the book's focus and stripped it of much of its miscellany.

As a forceful, committed little essay, which repeats some valid points and emphasizes the need to return to the study of basic strategy, Summers' book has value. To the extent that it has helped to rekindle the Vietnam debate, it has served an important function. But the merits of the book have been blown ridiculously out of proportion.

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**DEFENSE OR DELUSION: AMERICA'S MILITARY IN THE 1980s,** by Thomas H. Etzold (Harper and Row, 1982. 259 Pages. \$14.95). Reviewed by Lieutenant Colonel

**Jerry M. Sollinger, United States Army.**

In writing this book, Thomas Etzold has identified himself as the newest recruit in the ranks of purveyors of doom and gloom. "America's military is sick," he moans, "and if left to military professionals and experts, it will remain so...incapable of meeting the Nation's needs in the coming decade." The officer corps is a collection of knaves, fools, incompetents, or, at best, well-meaning bumbler who lack the wit to see problems, let alone provide solutions. The enlisted force, composed of fugitives from high school, sits in simian bewilderment before technical, expensive, and inoperable equipment. In short, we have the incompetent leading the illiterate armed with the unworkable.

The tone of the book offends, but that would be no more than a small irritant if its substance were worthy. For a book about national defense to merit a reading, it ought to bring something new to the debate: identify a new problem, offer an innovative remedy, or suggest an enlightening interpretation. But Mr. Etzold does none of these things. His catalogue of problems is a numbing repetition of the same issues people in and out of the service have argued for years.

The book has other drawbacks as well. Etzold frequently displays dubious logic. He argues, for example, that the military fixation with nuclear weapons contributes to the "military's inability to solve modernization dilemmas," at least in part because of the large funds such forces consume. But how something that traditionally takes about eight percent of the defense budget has such a dramatic effect Etzold leaves to our imagination. In another case, he claims that the officer corps is "becoming lower middle-class, or simply lower class." Yet almost all officers enter the service with college degrees, not normally the hallmark of the lower classes. In fact, today's tuition rates increasingly make a college education a goal for the well-to-do.

The book also contains some small factual errors — "eight-inch mortar

"rounds," instead of 81mm rounds, and "FM 105" instead of FM 100-5. Somewhat worse is Etzold's penchant for including war stories (described on the dust jacket as "vivid anecdotes") to illustrate his points. He offers such gems as a recruiter who claimed he could find only two of thirty men capable of reciting the alphabet, and an ROTC instructor who cited ungrammatical letters of recommendation for scholarship applicants from the owner of the local diner as evidence of the miserable quality of people entering the military service. These stories may be true, but the real question is: are they representative? Anyone thoroughly familiar with the military service knows they are not.

One can only sympathize with the book's major recommendation, which is that our leaders use a sustained and measured approach to solving the real problems of the United States' military service. Unfortunately, platitudes and a tiresome repetition of the problems will do lit-

tle to bring about that happy event, but that is about all this book has to offer.

#### **USSR FACTS AND FIGURES**

**ANNUAL, VOLUME 6, 1982**, edited by John L. Scherer (Academic International Press, 1982. 425 Pages. \$46.50). Reviewed by Alexander S. Birkos, Mount Shasta, California.

Anyone who needs solid, quantitative data about current political, military, social, and economic developments in the USSR should familiarize himself with this reference source. Interspersed among its numerical statistics is enough qualitative material to give the reader greater insight into the nature of Soviet policies.

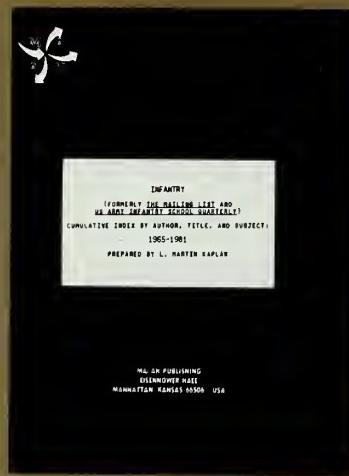
The contents cover 16 major categories of national activities, including a general survey for 1981 that discusses Soviet actions in Poland, the economy and agriculture, energy, health and welfare, the military, Europe and disarmament, and the Third World. The chapter on the

armed forces gives a good overview and an interpretive evaluation of the various branches of the Soviet defense establishment and the East-West military balance.

Unfortunately, in this series, some special topics in the armed forces section are not covered regularly, and the user has to consult the cumulative index to determine which volume contains the material he is interested in. For example, the deployment of Soviet divisions by regions and military districts can be found in Volume 5, but not in Volume 6. Nevertheless, when this work is used with the publisher's *Soviet Armed Forces Review Annual* and his *Military-Naval Encyclopedia of Russia and the Soviet Union*, it can provide the researcher with a broad base of information from which he can assess Soviet strategic and defense trends.

This book is an excellent addition to reference literature about the USSR, and military officers of all branches would do well to make note of it.

# **INFANTRY INDEX**



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HISTORY, KANSAS STATE UNIVERSITY, MANHATTAN,  
KANSAS 66506**

**MARSHALL: HERO FOR OUR TIMES**, by Leonard Mosley (Hearst Books, 1982. 608 Pages. \$18.50). Reviewed by Major D.R. Kiernan, University of South Carolina.

The author has succeeded in providing a factual biography of George C. Marshall that is also thoroughly entertaining. It is evident that Mosley did a good deal of painstaking research before preparing his narrative.

Marshall's humanity is the characteristic that is woven into the book. The author describes this humanity through the interpersonal relationships Marshall shared with the military and political giants of the first half of the 20th century. The reader catches glimpses of the parade of personalities who were a colorful part of this soldier-statesman's career.

Beyond the personal relationships, the reader also traces the seeds of contention that were sowed among the Allied powers during World War II and the ultimate split with the Soviet Union from its first chilly reception to the Marshall Plan. The behind-the-scenes efforts at appeasing such men as Charles de Gaulle and Bernard Law Montgomery leave the reader with the feeling that some of the combat in the global struggle did not take place on the battlefield.

Despite his more than 50 years of service to his country, Marshall was an enigma to the public. But his humility and his stoic approach to public service was not without its personal disappointments. His first wife, Lily, was a fragile woman who died childless after 26 years of marriage. His long-awaited promotion to Brigadier General came in 1935 after he had served 35 years in the Army. The command of the D-Day invasion in Europe in 1944 eluded him and went instead to Dwight Eisenhower. Finally, after serving as Army Chief of Staff, Secretary of State, and Secretary of Defense, he had to withstand the vituperation of the McCarthy investigation.

In this biography, a man slowly emerges who is a touchstone of stability to everyone he meets. The

great and near-great personalities of today need only to look at Mosley's book to measure the length of their shadows as they bask in the limelight that Marshall so successfully avoided during his career but which he now enjoys within the pages of this fine tribute.

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**THE MILITARY BALANCE, 1982-1983. The International Institute for Strategic Studies, 1982. 141 Pages. \$14.00, Softbound.**

This publication, which appears in the Fall of each year, is eagerly awaited by those who are interested in the facts of military power around the world. This year's book looks at those facts as they were in July 1982, and as the Institute freely admits, "There have been so many conflicts occurring during the preparation of this year's *Military Balance* that it has been peculiarly difficult to assess what has been lost in action and what replaced."

Despite this qualification, a more thorough assessment of the military power of the countries of the world is not likely to be found in any other publication.

As usual, the Institute first tackles the military stature of the world's two super-powers and then goes on to discuss the military power of the other countries of the world, the principal regional defense pacts and alignments, and, in three separate essays, the military balance in Europe. Several tables compare nuclear delivery vehicles, defense expenditures, military manpower statistics, and arms transfer agreements.

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**WAR SINCE 1945**, by Michael Carver (Putnam's, 1980. 322 Pages). Reviewed by Captain Harold E. Raugh, Jr., 2d Infantry Division.

Field Marshal Carver, who retired a few years ago from the British Army as Chief of the Defense Staff, has written the first clear and concise account of significant military activities since the end of World War II.

He vividly describes six British colonial conflicts, two French co-

lonial conflicts, two American "adventures," and several unconventional clashes — those between India and Pakistan, and between India and China, and the four Arab-Israeli wars.

He tells in great detail of the events that led up to each conflict, discusses the politico-military facets of the conflicts themselves, and, with great objectivity, relates the results and the lessons that were learned from each confrontation. His narrative is well-illustrated by an excellent photographic section and by eighteen maps, plus a month-by-month chronology of each conflict.

It is an indispensable reference work for the professional soldier and for the historian.

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**RECENT AND RECOMMENDED**

**MILITARY SERVICE IN THE UNITED STATES**. Edited by Brent Scowcroft. The American Assembly, Columbia University. Prentice-Hall, 1982. 231 Pages. \$7.95, Softbound.

**MACARTHUR IN KOREA**. By Robert Smith. Simon and Schuster, 1982. 256 Pages. \$16.50. **THE SPIRIT OF AMERICA**. By Hugh F. Kayser. ETC Publications, 1982. 382 Pages. \$16.95.

**WORLD MILITARY EXPENDITURES AND ARMS TRANSFERS, 1970-1979**. Defense Program and Analysis Division, U.S. Arms Control and Disarmament Agency, Washington, D.C. ACDA Publication 112, 1982. 134 Pages. Softbound.

**OUR CHANGING GEOPOLITICAL PREMISES**. By Thomas P. Roma. National Strategy Information Center, 1982. 352 Pages. Softbound.

**GEPARD: THE HISTORY OF GERMAN ANTI-AIRCRAFT TANKS**. By Walter J. Spielberger. The Nautical and Aviation Publishing Company of America, 1982. 256 Pages. \$29.95.

**NAPOLEON'S GREAT ADVERSARIES: THE ARCHDUKE CHARLES AND THE AUSTRIAN ARMY, 1792-1814**. By Gunther E. Rothenberg. Indiana University Press, 1982. 219 Pages. \$18.95.

**KINGDOMS OF THE BLIND**. By Harold W. Road. Carolina Academic Press, 1980. 294 Pages.

**SOVIET MILITARY STRATEGY IN EUROPE**. By Joseph D. Douglass, Jr. Pergamon Press, 1980. 237 Pages.

**SUCCESSFUL SHOOTING**. By Bill Pullum and Frank T. Hanenkrat. NRA Stock No. ASB 17310. National Rifle Association, 1982. 213 Pages. \$14.95.

**VIETNAM: THREE BATTLES**. By S.L.A. Marshall. A Reprint. A DaCapo Paperback. DaCapo Press, 1982. 242 Pages. \$7.95.

# INFANTRY LETTERS



## INFANTRY UNLIMITED

Dear Sir,

It is absolutely amazing that our journal considered the article "Keep It Light" of sufficient merit to qualify as a feature. This article represents the worst thinking of our branch; furthermore, it is incorrect and inconsistent.

ARTEP 71-2, which governs all training for the mounted combined arms team, includes all of the traditional light infantry tasks. These tasks are required training for mechanized infantry squads, platoons, companies, and battalions.

Air assault infantry is still one of our lightest infantry formations, and the article ties these troopers to their assault ships as it does mechanized troopers to their fighting vehicles. It fails to recognize the flexibility and dual threat represented by these infantrymen.

Infantrymen, whatever their battalion of assignment, are not limited to or confined by their primary "type." We are all deployable with or without all of our equipment. We can strike mounted, dismounted, from the sky, or from the sea. We should be proficient enough in our art to realize that, train at it, and also expect it from our adversaries.

CARL F. ERNST  
LTC, Infantry  
5th Infantry Division (Mechanized)

private first class who was pictured on your front cover 24 years ago running the bayonet course in Bamberg, Germany, in competition for the EIB (January-March issue, 1959).

That young PFC is now an old command sergeant major in the 24th Infantry Division and now an artilleryman (by chance, not by choice). But I still believe in the spirit of the bayonet, and I still read INFANTRY.

LEE S. RODRIGUEZ  
CSM, USA

## Infantry



*EDITOR'S NOTE: Here's that cover again, Sergeant Major. We were pleased to hear that you're still around and still a reader of INFANTRY, even if you are an artilleryman now.*

## LIKE BAYONET, STILL AROUND

Dear Sir,

Since the Infantry School has now gone back to bayonet training, I thought you might be interested in knowing what happened to the young

We welcome letters to the Editor on any subject that has been treated in our magazine as well as on issues of general interest to our readers. All letters are subject to editing and possible abridgment.

## WINTER TRAINING TASKS

Dear Sir,

Reference my article "Winter Training" in the November-December 1982 issue of INFANTRY (page 29), I have a detailed training and evaluation outline, complete with references, that I will be glad to share with anyone who wants one. It applies specifically to dismounted infantry but can be adapted to apply to any type of unit.

My address is 205th Infantry Brigade (Sep), Building 507, Fort Snelling, MN 55111; AUTOVON 825-5135/5136.

RICHARD A. DIXON  
LTC, Infantry  
Command Advisor

## QUEEN'S CROWN SPARKLES

Dear Sir,

I would like to underscore the message of the fine article "The Future of the Infantry" (INFANTRY, September-October 1982, page 19). I would also like to add that, as the "legacy for the infantry of tomorrow" unfolds, so will the final history of our successes in future battles.

I am convinced that our military leaders understand and fully appreciate the need for highly trained and motivated, well equipped, and expertly led infantry soldiers. No technological breakthrough in the past has been able to diminish the infantry's role; in fact, just the opposite has occurred. Nor is there any technology in the foreseeable future that will reduce the need for expert infantry.

As the superpowers' weapons of mass destruction remain in checkmate and as many futuristic and ex-

pensive innovations fall prey to inexpensive but highly destructive, hand held infantry weapons, the infantry will still be the one that ultimately settles any confrontation.

These are exciting times for the infantry. The Queen of Battle's crown has never sparkled more brilliantly.

JAMES R. CARLSON  
LTC, IN  
2d Battalion, 4th Infantry

## THEY'RE STILL INFANTRYMEN

Dear Sir,

Captain Kenneth A. Siegel's article "Which Comes First?" in the September-October 1982 issue of *INFANTRY* left me with an uneasy feeling for several reasons. The first was the idea that an infantry unit should voluntarily abandon training for its real mission and then rationalize it by assuming another mission entirely. The other things that disturbed me were the various forces apparently originating at higher levels that might have led to that decision.

Today's leader is expected to achieve a given mission through the best use of the resources he has —

time, money, materiel, and personnel. Any increases in money and materiel are pretty much beyond his control. This leaves the higher-echelon commander with only the variables of troops and time with which to facilitate the missions of their subordinates. If these should prove inadequate, then a change of mission must be considered that will take the real situation into account.

This problem must be particularly acute in such Reserve Component units as Captain Siegel's, because their training time is strictly regulated and their manning levels are very much a matter of chance. For these reasons, Siegel cannot be faulted for the analytical way in which he approached his mission. Once it had been determined that the unit did not have the time to train well on all of its missions, then a small number of missions had to be selected at the expense of the others. Obviously, these missions had to be carefully selected to allow the unit to achieve the most combat readiness and at the same time to prevent any glaring weaknesses from developing. At this point the unit's higher headquarters, knowing that the list of tasks was too long for the unit to handle, might have stepped in to provide a set of priori-

ties for its training.

To return to the specific topic, the unit's conclusion, apparently, was that it could conduct training in only one area to a high degree of proficiency. It then selected mounted operations so that it would be familiar with the prime mover and keep abreast of its affiliated tank units, thereby maintaining an intact combined arms team.

But this idea should not become the accepted standard, because it is based on the assumption that if an infantry unit can do only one thing well it should be mounted operations so it will be there when the tank unit needs its support.

Mechanized infantry, of course, must be considered a part of a combined arms task force. But the APC is neither more mobile nor more agile than the tank; wherever one can be employed, so can the other. In mounted combat, the tank is a powerful weapon platform with conclusive antiarmor, antimateriel, and antipersonnel capability and with good crew protection. The APC is a lightly armored, mobile manpower container with a single antimateriel-antipersonnel weapon that requires the firer to be exposed while the target is generally dug in. Thus, for the mounted





# From The Editor

This issue begins our 63rd year. Before we lay our old print to rest, it is time to review some of those articles, features, and other notes that served the Infantry community so well this past year.

The continuing series on leadership produced such features as "Growing a Leader" (January-February), "The Company" (March-April), "Chain of Command" (May-June), "The Balance" (July-August), "The Difference" (September-October), and "Building a Team" (November-December).

Articles addressing key, current issues in Infantry organization, administration, tactics and techniques included "Regimental System" (March-April), "Keep It Light" (July-August), "The Future of the Infantry" (September-October), "AirLand Battle: Implications for the Infantry" (March-April), and "The Mechanized Infantry Battalion Task Force in the AirLand Battle" (July-August).

Historical pieces that spoke of the Infantry's rich and noble past were "Corregidor: An Airborne Assault" (January-February), "Crossing the Rhine" (July-August), and "Fame is a Fleeting Thing" (November-December).

An annual index for 1982, listing all articles by subject and author, is available to anyone who requests it.

But what about 1983? That, to a large extent, depends on you, our readers! Some of you are using new training methods in your company or battalion that nobody else knows about. Others of you have new ideas for the way things "ought" to be done, now or in the future. We would like to pass such things as these on to our readers through the pages of INFANTRY. So send us your notes, drafts, outlines, ideas, or letters. We will do the best we can to help you get your ideas published.

As an additional note, the Infantry School maintains two hot lines for military callers for around-the-clock contact with the field. If you have something of an immediate nature to pass on to INFANTRY, or if you have general questions and comments for the School, the number to call is AUTOVON 835-4487 or commercial (404) 545-4487. The number for questions dealing specifically with the Army Training and Evaluation Program (ARTEP) is AUTOVON 835-4759 or commercial (404) 545-4759.

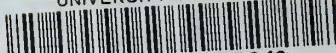
MDB

## OUTSIDE BACK COVER:

Arctic Test Center, Fort Greely, Alaska, 1974, by Lieutenant Mark McFaul. (United States Army Art Collection)

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